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ABSTRACT

This document is the seventh edition of the California Articulation Number (CAN) System guide, which was revised in 2002. Some of CAN's goals are to help community college students transfer smoothly to four year universities, promote the development of a common method of course identification within each segment of public postsecondary education, and help identify courses with comparable content so that certain competencies can be expected upon completion of such courses. The document gives an overview of CAN and its goals for the future. The report is divided into the following chapters: (1) what is course articulation?; (2) what is CAN?; (3) how to take a CAN course; (4) how does CAN work?; (5) steps to participate in CAN; (6) how to prepare and submit a CAN articulation report?; and (7) what is next for CAN. The document contains fourteen appendices which provides information on approved list of courses in CAN, CAN course prefixes, glossary of CAN terms, CAN institutional statement of commitment, diverse numbering of qualified courses identified by CAN, and sample major preparation agreements between two year and four year institutions and between four year and four year institutions. Contains numerous tables and diagrams throughout report. (MZ)

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CAN

California Articulation Number System

your cornerstone to the transfer process

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CANGuide

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CAN Guide

This *GUIDE* is written to explain how the CAN System works and to provide comprehensive instructions for the use of, and participation in, the CAN System.

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Revised 2002, 7th Edition

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CAN
California Articulation Number System

CAN Guide

Seventh Edition

This handbook has been produced for you by the CAN System Office. CAN is always seeking ways to make the CAN system work more smoothly. For more information, check out our web site at www.cansystem.org

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Electronics versions of this publication are available at www.cansystem.org.

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Introduction

Every year, more than 50,000 community college students transfer to the California State University and the University of California. It is common for many of the 108 community colleges to have students transfer to all of the public four-year universities.

A glance at campus catalogs, course numbering schemes, academic policies, and the processes involved in determining course comparability for major preparation or comparability of courses in support of another major illustrates the potential for confusion and misinterpretation for students. There is a need for a course numbering system to simplify the articulation process as well as to provide accurate academic preparation information to students.

Students can be the benefit from a smooth articulation process. Course-to-course articulation is fundamental to academic planning and the transfer process. Students must know which courses to complete at their home campus in order to meet specific degree requirements at to the receiving institution(s) of their choice. Although desirable, not all two-year colleges articulate a significant part of their curricula with *all* four-year institutions and nor should the thirty-one public four-year institutions expect community colleges to provide thirty-one unique variations of lower division preparatory courses. This is why a comprehensive, understandable, and credible articulation system adequate to accommodate the number of students and the diversity of programs in California is needed... this is the role of the California Articulation Number (CAN) System.

Concern over the complexities facing transfer students and the declining rate of transfer led to Legislative action in 1983. Senate Bill 851 requested that the California Postsecondary Education Commission (CPEC) "...develop a plan for a course numbering system to be used by public postsecondary education institutions." Chapter 565 of the Education Code directed that the course numbering system be designed to do all of the following:

- Promote the transfer of community college students to four-year postsecondary institutions by simplifying the identification of transferable courses and the specific disciplines and programs to which those courses are transferable.
- Promote the development of a common method of course identification within each segment of public postsecondary education where there is a clear need for such a common method.
- Help identify courses with comparable content, so that certain competencies can be expected upon completion of such courses.

CPEC conducted a nationwide study of course numbering systems. Among the conclusions in the study completed in December 1984 were:

- A systematic approach to numbering baccalaureate-level courses offered by California's various segments and institutions of higher education would help students make choices related to transfer, plan their lower-division programs, and evaluate alternative transfer opportunities. The present lack of coherence in course numbering, even within segments, results in transfer students losing time and credit in earning their baccalaureate degree and may result in students being denied opportunity to transfer because of confusion about courses to be taken to satisfy transfer requirements.
- A uniform course-numbering system like that in place in Florida is unnecessary in California, excessively costly and bureaucratic, and probably unworkable because of the size and complexity of California higher education . . . . Furthermore, such a uniform system appears to make unduly simplistic assumptions about the comparability or equivalency of courses offered by different institutions and gives Community College students and counselors a false sense of security about equivalency if they are not fully familiar with the special conditions and limitations imposed by some institutions on

transfer courses with common numbers.

In January 1985 the Commission recommended the Legislature and the Governor fund the implementation of the California Articulation Number (CAN) System, which was a voluntary effort that begun in 1982 by representatives of the three segments of public higher education. The System was designed to simplify the transfer process. By increasing the articulation of courses and removing the mysterious aspects of multiple course numbering systems currently used, the System serves as a vital component of a successful transfer program.

The California Articulation Number System was initiated on July 1, 1985. The three public segments of higher education--the California Community Colleges, the California State University, and the University of California—were partners in this endeavor until November 1990, when the University of California withdrew. Since that time, the California Community Colleges and the California State University have jointly collaborated on CAN. Representatives from the public segmental offices, the statewide academic senates and articulation officers from the Community Colleges, the California State University and the independent colleges and universities serve on the CAN Board of Directors.

Senate Bill 121 provides for the implementation of transfer recommendations made by the Joint Committee for Review of the Master Plan in 1987. This legislation enacted in October 1991, requires that the three public segments have "as a fundamental policy the maintenance of a healthy and expanded student transfer system."

The bill requires that faculty in each major at the four-year public campuses develop, in conjunction with community college faculty, discipline specific articulation agreements for those majors that have lower division prerequisites. The bill states that each public postsecondary education segment will be accountable for the development and implementation of agreements.

The foundation of the CAN System is discipline-based bilateral articulation agreements. Courses in the System are lower division major preparation core courses and support courses. Inter-segmental faculty committees have created succinct course descriptions in 35 disciplines currently in CAN. This activity has promoted communication and the spirit of cooperation. The descriptions are reviewed by faculty on four-year campuses on two and four year cycles to insure currency and appropriateness of courses for major preparation.

Quality control and the integrity of the CAN System are maintained by an annual review of the courses that have been identified, articulated, and qualified to meet the criteria. This review is facilitated on each campus by an articulation officer who works with the faculty.

The CAN System, based on course-to-course articulation, simplifies the identification of transferable lower division major preparation courses. It can be used with a high degree of confidence by students, faculty, and staff. The System is an established and reliable mechanism for providing vital information to students for a successful transfer program--the intent of Senate Bill 121.

What is Course Articulation?

Course articulation, for the purposes of the California Articulation Number System, is defined as the written agreement developed between two institutions to accept and use a specific course that has been completed on a sending campus to meet a specific course requirement on a receiving campus. Faculty in each discipline review courses to determine comparable content and approve all agreements. The agreements authorize the acceptance of one course "in lieu of" another for transferring students. Articulated courses are not to be construed as "equivalent," but rather as *comparable* courses, i.e., the content is such that similar outcomes are assured and advancement to the next level of instruction is appropriate.

Course articulation paves the way for smooth transition and progression through the educational system in California – the transfer of students from one campus to another. It provides a link between faculties, campuses, and segments. Articulation promotes "unity" in the educational system and contributes substantially to the additional three goals stated in the renewed *Master Plan*, July 1987: "Equity, quality, and efficiency." The implementation of a course articulation mechanism as a part of the transfer function should be an institutional priority in support of the total transfer function. SB 121 requires this as fundamental policy.

Who is Responsible for this Vital Process?

Course articulation is a faculty responsibility. Faculty involvement and cooperation are essential and fundamental to the articulation process. They develop curriculum, establish requirements, and maintain classroom standards that assure the appropriate outcomes. They make the articulation decisions.

While the faculty makes the articulation decisions, the articulation process is directed and facilitated by an "Articulation Officer."

What are the functions of an Articulation Officer?

The Articulation Officer serves as the liaison

- between the home campus and other institutions;
- between the home campus and segmental offices;
- between academic departments on the home campus;
- between academic affairs and administrative/student services.

The Articulation Officer

- serves as a consultant, moderator, adviser, and communicator of articulation information;
- initiates faculty approved articulation agreements and maintains official campus records;
- develops and implements an effective system for communicating this vital information to students and faculty;
- works closely with faculty and academic units, is knowledgeable about home campus programs as well as those of other institutions, communicates the changes and concerns of other campuses, and participates in, or is apprised of, actions by the General Education Committee, the Curriculum Committee, the Academic Policy Committee, and the Catalog Committee;
- is a well informed resource person for the campus's academic, administrative, and student services areas;
- promotes participation in cooperative intersegmental programs.

What is CAN?

The California Articulation Number (CAN) System is a cross-reference course identification system for many lower-division, transferable major preparation courses commonly taught on college campuses. CAN is based on course articulation -- courses considered to be comparable, but not necessarily identical, and acceptable "in lieu of" each other. CAN is simple, functional, and flexible, yet is structured to provide accuracy and consistency. CAN allows each campus to retain its own course number, prefix, and title. When a course has met the criteria and is qualified to use a CAN, it is printed as an addendum to the campus's course number and prefix in catalogs and other publications.

Traditionally, course articulation that had been developed prior to CAN was between two-year and four-year campuses. Although fewer students transfer between four-year campuses, the construction of a network of articulation agreements between four-year schools contributes significantly to intersegmental and intrasegmental communication and better student preparation. In order to obtain a reasonable degree of consistency and comparability in lower division course preparation, a concerted effort was necessary to increase both quantity and quality of course articulation between the four-year campuses as well as between the two-year and four-year campuses. To preserve the high degree of quality which has been achieved since the beginning of CAN, articulation must be maintained in a current state.

The criteria for courses to qualify to use a CAN prefix is the same for both two- and four-year campuses. The increased bilateral agreements between four-year campuses serve to reinforce the cooperation that is essential to planning proper preparation and thus achieving successful transfer.

CAN began with 107 semester courses and 124 quarter courses; it currently has 207 semester courses, 52 quarter courses, 36 sequence designations, and 36 academic disciplines. Courses identified for the Number System are lower division major preparation courses, or support courses for other departmental majors. Qualified courses may also be used to meet other campus requirements such as general education/breadth.

Course descriptions have been developed by intersegmental faculty committees in thirty-five of the thirty-six disciplines. The descriptions are the guidelines for faculty to determine if a comparable course is offered on their campus in order to identify it for the CAN System; and then to articulate it with other campuses that also offer a comparable course. Please see Appendix I.

How to CAN a Course?

Accredited public and private colleges and universities in California offering associate degrees, baccalaureate-level transfer courses, or baccalaureate degrees are encouraged to qualify courses to use California Articulation Numbers and participate in CAN.

The California Articulation Number System is articulation agreements that are based on written, faculty-approved articulation of courses between campuses. To qualify a course to use a California Articulation Number, the following criteria must be met for each course:

NEGOTIATE WRITTEN, FACULTY-APPROVED ARTICULATION AGREEMENTS FOR EACH COURSE WITH 4 CALIFORNIA PUBLIC FOUR-YEAR INSTITUTIONS.

Figures 1 and 2 illustrate a possible set of articulation agreements for a campus to qualify a course. The symbol ↔ indicates bilateral, verified articulation.

FIGURE 1. General Chemistry for Science Majors - 2 yr. campus

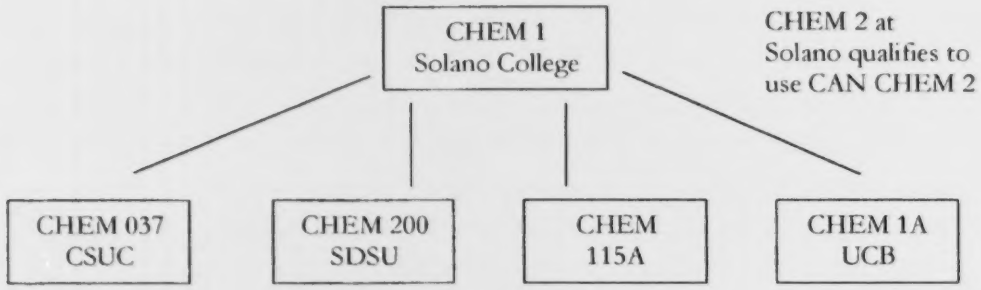


FIGURE 2. Introduction to Macroeconomics - 4 yr. campus

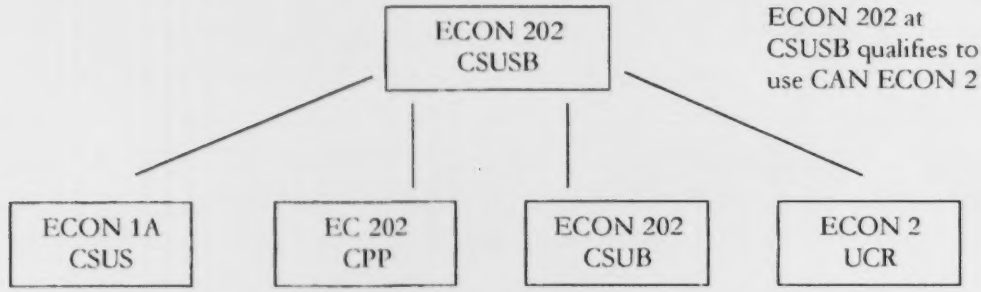
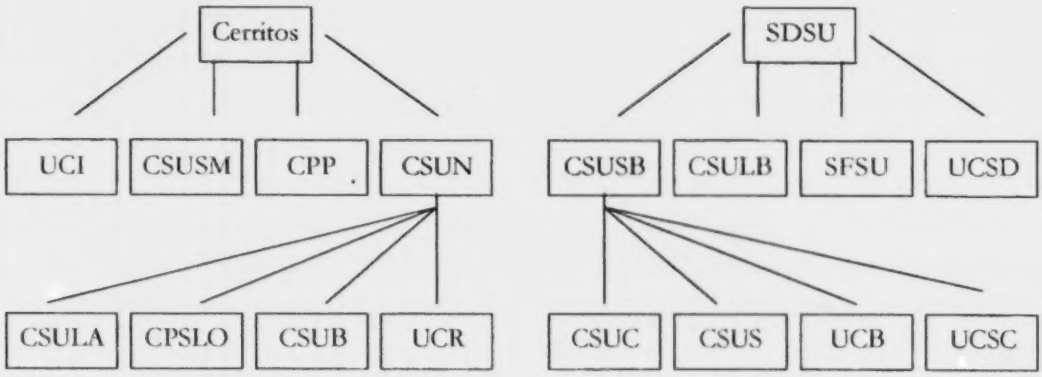


FIGURE 3. Articulation Network Supporting the California Articulation Number System



FOR ILLUSTRATION PURPOSES ONLY!

The example in Figure 3 illustrates the commitment and articulation network for participating campuses to accept and use a California Articulation Number for a given course.

- Bilateral course articulation exists between Cerritos and each of 4 public four-year universities; therefore, Cerritos qualifies to use a California Articulation Number for the course.
- Bilateral course articulation exists between CSUN and each of 4 public four-year universities; therefore, CSUN qualifies to use a California Articulation Number.
- Bilateral course articulation exists between SDSU and each of 4 public four-year universities; therefore, SDSU qualifies to use a California Articulation Number.
- Course articulation exists between CSUSB and each of 4 public four-year universities; therefore CSUSB qualified to use a California Articulation Number for the course.

Cerritos, as a participating campus, agrees to accept and use, just as its own course is used, the qualified courses at CSUN, SDSU, and CSUSB. CSUN, as a participating campus, agrees to accept and use, just as its own course is used, the qualified courses at Cerritos, SDSU, and CSUSB. CSUSB agrees to accept CSUN, Cerritos, and SDSU courses and use them as its own qualified course is used. Likewise, SDSU agrees to accept Cerritos, CSUN and CSUSB qualified courses and use them as its own course is used.

The other campuses (unshaded boxes) in Figure 3 have not yet qualified to use a California Articulation Number in this example.

Independent California colleges and universities are encouraged to fully participate in the Number system. However, if independent institutions are unable to articulate with 4-year public institutions in California, they may identify themselves as an "accepting only" institution. This indicates their policy is to *accept* CAN courses comparable to their courses. This will benefit both the "accepting only" schools and prospective transfer students. It is important to note that a course transferred from a participating school would be evaluated according to the policies of the receiving campus. A non-participating campus is not committed or obligated to use the course as their own comparable course is used.

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How Does CAN Work?

The basic premise of the California Articulation Number System is that identically-numbered CAN courses are acceptable "in lieu of" each other. Campuses with one or more courses that have met the criteria and whose officials have signed the Statement of Commitment agree to accept the identically numbered courses *and use them in the same way their own CAN-qualified courses are used.* The California Articulation Number system eliminates the necessity for each campus to negotiate articulation agreements with every other campus.

Each campus retains its own course number, prefix, and title. The California Articulation Number designation (CAN CHEM 2, for example) is simply added to course listings in class schedules, catalogs, transcripts, and other campus publications to assure it is readily identifiable to anyone seeking the information. Students at a participating campus have the certainty that a CAN-designated course on their campus will be accepted in lieu of an identically designated CAN course at any other participating campus in the state.

Each course included in the System has been assigned a number and discipline prefix, e.g., CAN HIST 2. Semester courses carry EVEN numbers; a quarter course carries an EVEN number *if* the course is acceptable "in lieu of" a semester course. Example: If a 4-quarter-unit Western Civilization course is acceptable "in lieu of" a 3-semester-unit Western Civilization course, and vice versa, the courses are given the same designation: CAN HIST 2. Other quarter-unit courses are assigned ODD numbers, e.g. CAN HIST 1, CAN HIST 3, or CAN HIST 5. A sequence of courses within a discipline is the sum of the content of two or more courses and is assigned a letter designation, e.g., CAN HIST SEQ A. Example: If a quarter system campus articulates its first year Introductory Western Civilization courses *only by sequence,* the campus would identify those courses as CAN HIST SEQ A, which on other campuses would correspond to CAN HIST 1 + CAN HIST 3 + CAN HIST 5 *or* CAN HIST 2 + CAN HIST 4. Approved sequence designations are found in Appendix E. Only the *approved* combination of courses within a sequence and discipline prefixes are acceptable.

The example below illustrates the *general* principles of acceptance between semester and quarter term courses. The symbol ≈ should be read "acceptable in lieu of."

Semester Terms		Quarter Terms
CAN HIST SEQ A	≈	CAN HIST 2 plus CAN HIST 4
	≈	CAN HIST 1 plus CAN HIST 3 plus CAN HIST 5

SEMESTER UNIT COURSE (Even Number)		QUARTER UNIT COURSE (Odd Number)
The first semester *is*	≈	the first quarter course
The second semester *is*	≈	the third quarter course
The first and second semester courses *are*	≈	the first, second, AND third quarter courses

QUARTER UNIT COURSE (Odd Number)		SEMESTER UNIT COURSE (Even Number)
The first quarter *is not*	≈	the first semester course
The first quarter and second quarter courses *are*	≈	the first semester course
The third quarter *is not*	≈	the second semester course
The second and third quarter courses *are*	≈	the second semester course
The first, second, AND third quarter courses *are*	≈	the first and second semester courses

Steps to Participate in CAN!

Preliminary Considerations

1. Using the Approved List of Courses, Appendix D, and CAN course descriptions, Appendix I, the articulation officer, in conjunction with appropriate faculty representatives, *identifies* courses offered on the home campus that appear to be comparable and potentially eligible for the CAN System. Courses should be lower division major preparation or lower division support for another major. Upper division courses may not be used. All courses must be transferable to the public universities. (NOTE: IDENTIFICATION OF PROPER COURSES AT THE ONSET IS IMPORTANT)

   A. DO NOT force a course identification. Adhere to time periods where stated. If a course on your campus contains *substantially different, or more,* content than one listed on the Approved List of Courses, it should NOT be identified for the Number System.

   B. Although we believe that it is in the best interest of students to identify courses *individually* whenever possible, there are times when the sequence designation should be used. If courses on your campus include all of the content of a designated CAN sequence, e.g., CAN PHYS SEQ B, Mechanics–Electricity and Magnetism–Heat, Light, Introduction to Modern Physics, but are not taught individually for CAN PHYS 8, 12 and 14, the sequence designation should be used. Any course within the sequence that will articulate individually may also qualify to carry a CAN.

      Example: Mechanics is frequently offered as an *individual* course; therefore it has the potential to qualify as CAN PHYS 8, individually. CAUTION: If your courses appear to match individual courses on the Approved List of Courses but all your articulation requires that an entire sequence be completed, the sequence designation should be used.

   C. The Number System includes 36 *approved* sequences of courses. Combinations of courses other than those on the Approved List–Appendix D– should not be reported.

2. Review the articulation agreements you have with 4-year public California campuses on the courses that have been identified. Check for accuracy and current status. (If an articulation agreement is more than two years old, confirm that it is a valid agreement.)

Steps to Participation

1. **Report**

   Appendix F of the *Guide* is the form used to report the articulation with 4-year public campuses.

   Reproduce the blank form F1, F2 or F-SEQ. Use a separate form for each CAN academic discipline. Send the completed form to the CAN System Office. For more detailed information on preparation of the articulation report form, please see page 10.

Appendix F is also available on the CAN website at www.cansystem.org. The forms can be downloaded, filled in electronically, then emailed or faxed to the CAN Office, please see page 28.

Upon receipt of a campus articulation report in the CAN System Office, the campus is designated as a REPORTING CAMPUS. The California Articulation Number System Office will:

- Acknowledge receipt of initial reports only;
- Record the data: campuses articulated courses, prefixes, *exactly as you have submitted* on the report form;
- Verify that the same articulation is in effect on *both* campuses (this is bilateral articulation);
- Work with reporting campuses to clarify discrepancies;
- Determine whether course qualifying criteria

have been met;

- Prepare and maintain status reports for each campus.

2. Qualify

When a campus has met the established criteria on one or more courses, the campus is designated as a QUALIFYING CAMPUS. The CAN System Office will:

- Notify the reporting campus when one or more courses qualify to use a California Articulation Number.
- Send monthly updates to the campus as additional courses qualify.
- Send a "Statement of Commitment" for campus officials to sign and return to the CAN System Office. Signatures of the Articulation Officer, the Faculty Senate Chair and the Chief Executive Officer (or their designee) of the reporting campus are required. A signed Statement of Commitment from a campus is the formal affirmation of a commitment to articulation, to facilitate transfer, and to the California Articulation Number System. The Statement of Commitment is signed only one time and remains in effect until officially withdrawn by the Chief Executive Officer of the campus.

- Maintain up-to-date campus articulation information through regular contacts with appropriate representatives of the campus.

3. Participate

Upon receipt of the signed Statement of Commitment in the CAN System Office, the campus is designated as a PARTICIPATING CAMPUS. A participating campus agrees to accept and use CAN-qualified courses in lieu of its own courses designated by the same California Articulation Numbers. The statement includes other principles and it should be completely understood that participation in the CAN is a ***CAMPUS COMMITMENT.***

An "Annual Review" of courses identified, courses qualified, and the articulation supporting those qualified courses is completed once a year in the spring. We believe it is essential that articulation be regularly reviewed to assure faculty and students that agreements are current and accurate. Each participating campus is expected to review the courses and the articulation substantiating the CAN qualifications. ***If a campus does not respond to the request for annual review two consecutive years, the courses from that campus will be withdrawn from the System.***

How to Prepare and Submit A CAN Articulation Report!

When faculty-approved articulation agreements with four-year campuses are in place, transfer that information to the articulation report form (Appendix F). Follow these easy steps to prepare the report:

1. Duplicate the form. Use a separate page for each CAN discipline or go on-line to www.cansystem.org.
2. Enter the name of your campus.
3. Enter the CAN System discipline, e.g., GEOL. (See Appendix C for a listing.)
4. Enter your campus discipline prefix. A "Geology" course in the CAN System may be identified with an "Earth Science" prefix on your campus.
5. Enter your campus course numbers that correspond to the Approved List of Courses in the spaces below the CAN blocks. (See Appendix D)
6. List the names of the four-year campuses with which you have current course articulation agreements in the discipline.
7. Enter the course prefix and number for the articulated courses in the appropriate columns.
8. Enter the title, signature, e-mail address and telephone number of the campus official submitting the report. (If your report consists of more than one page, initials only on subsequent pages are acceptable.)
9. Mail or fax report to the CAN System Office at:
   555 University Ave., Ste. 210
   Sacramento, CA 95825
   or fax at (916) 649-8260.

Remember:

- Cover letters are not necessary.
- If one "quarter" course is articulated with one "semester" course, both will use an even California Articulation Number.
- Multiple course listings, such as Art 1 or Art 4, are not recommended. If used, extreme care must be taken to clearly state on the report and in all publications what the conditions are; articulation MUST support the multiple courses.
- Lower division transferable courses only; upper division courses are not included in the Number System.
- Send reports to the CAN System Office as your articulation is developed and/or updated. If reports are sent regularly, the number of qualified courses increases regularly, data is current and better service is provided.
- Valid reasons for deleting a course from the System may occur. If it becomes necessary to withdraw a qualified course from the Number System, an official withdrawal form, signed by the Academic Vice President (or designee) and the articulation officer must be submitted. Forms may be requested from the CAN Office. Adequate lead time and notification to campuses is important. A qualified course must be accepted during the period of qualification by both campuses.
- Reports will be received in the CAN Office on a rolling basis throughout the year. Newly qualified courses will be immediately added to the CAN database. Courses will be officially withdrawn on June 30th of each year.
- To ensure continued accuracy and integrity, the CAN System Office will mail the request for an Annual Review in the Spring semester of each year. Each campus is required to review the status of courses identified, courses qualified, and the articulation supporting those qualified courses. Although the request is mailed to the Articulation Officer, the review should be made in consultation with appropriate faculty. If a participating campus does not respond to the Annual Review for two consecutive years, the qualified courses will be withdrawn from the Number system. (Policy established October 1990.)

What's Next?

The articulation is in place! The courses are qualified to carry California Articulation Numbers. The fundamental principles on which the Number System is based are sound and understood. Your campus agrees to participate in the CAN System. What Is Next?

TELL EVERYONE!
Send Memos!
Post Lists!
Don't File It Away!

- Your campus is one of 122 participating campuses in the state.
- Your campus is committed to helping transfer students complete proper major preparation and smooth the transfer process.
- CAN courses make identification of comparable courses easier, give students the benefit of articulation with many campuses statewide. Example: CAN PHYS 8, on many participating campuses, will be accepted and used on any other participating campus that has also qualified a course for CAN PHYS 8.

Two-year and four-year institutions have a primary responsibility to provide information to all students and prospective transfer students to facilitate the transfer process. The California Articulation Number System reduces the confusion caused by multiple systems for numbering courses and assists in proper selection of courses for transferring students. Without doubt, it helps ***YOU*** and ***STUDENTS***! But, the success of any program, particularly one serving students, depends on an effective and efficient delivery system. How do you get this vital information into the hands of those who need it? Communication with several disparate groups is time consuming and difficult, but each campus must develop and implement its own unique delivery system.

Who are the users of articulation on your campus? When do they need the information? How can you communicate the information?

A suggested list of recipients of information about the California Articulation Number System includes:

- new students,
- prospective students,
- students who decide after admission to transfer to another campus,
- faculty and department staff personnel,
- counselors,
- evaluators,
- outreach staff;
- EOPS, EOP, SAA, Disabled Students Services, Relations with Schools, and Advising staff and
- Transfer Center Staff

The information may be communicated in the following ways:

- Prospective student brochures
- Student orientations
- Campus newspapers and bulletins
- Local city and community newspapers
- Presentations to parent-student-community groups
- Transcripts
- Campus catalogs and class schedules
- CAN posters and brochures
- Project ASSIST
- "Briefs" and information handouts (Appendix H)
- CAN Catalog of Courses

The CAN System Office mails the *CAN Catalog* to participating campus articulation officers and transfer center directors annually in September. It lists qualified courses, effective dates, and participating campuses. It should be

available to students and those who work with students and students' documents.

The CAN System Office currently produces *THE CAN DIGEST*, an electronic newsletter designed for counselors, advisors, faculty, articulation officers, and students, communicates information relevant to use in transfer of courses. The newsletter also contains information regarding the goals, progress and status of CAN. The CAN Digest is available at http://www.cansystem.org/news.htm.

APPENDICES

APPENDIX A

Four-Year Campus
Economics Department
College Avenue
Your Town, CA 00000
(123) 456-7890

Example:
Major Preparation Agreement

ECONOMICS
Transfer Credit Agreement with TWO-YEAR CAMPUS
Lower Division Major Preparation

(Four-Year Campus) agrees to accept the community college courses listed below toward meeting lower division preparatory requirements in this major. Any remaining requirements may be completed upon transfer. If there is a "break" in your attendance, you will be required to fulfill any new requirements which may be imposed subsequently. Contact your counselor or the departmental advising office listed above if you have questions.

FOUR-YEAR CAMPUS LOWER DIVISION MAJOR PREPARATION:		**COMMUNITY COLLEGE PREPARATION:**	
REQUIRED LOWER DIVISION COURSES:			
Econ. 1A, Introduction to Macroeconomics (CAN ECON 2)	(3)	ECON 101, Economic Principles: Macroeconomics (CAN ECON 2)	(3)
Econ. 1B, Introduction to Microeconomics (CAN ECON 4)	(3)	ECON 102, Economic Principles: Microeconomics (CAN ECON 4)	(3)
Stat. 1, Introduction to Statistics (CAN STAT 2)	(3)	MATH 134, Elementary Statistics (CAN STAT 2)	(3)

APPROVED:

Four-Year Campus Economics Department Chair	Date	Two-Year Campus Economics Department Chair	Date
Four-Year Campus Articulation Officer	Date	Two-Year Campus Articulation Officer	Date

BEST COPY AVAILABLE

Example:
4-Year to 4-Year Agreement

HISTORY

Four-Year Campus X
History Department
College Avenue
Your Town, CA 00000
(123) 456-7890

Four-Year Campus Y
History Department
University Boulevard
Their Town, CA 99999
(987) 654-3210

MAJOR PREPARATION AGREEMENT

Four-Year Campus X Major Preparation The courses listed in section A of this column are required preparation for the History major.		**Four-Year Campus Y Transfer Preparation** The courses listed in this column will be accepted in lieu of the Four-Year Campus X courses listed in the left column.	
A. LOWER DIVISION CORE PREPARATION:			
Hist. 4, Survey of Early Western Civ. CAN HIST 2	(3)	HIST 100, History of Western Civilization	(3)
Hist. 5, Survey of Modern Western Civ. CAN HIST 4	(3)	HIST 101, History of Western Civilization	(3)
Hist. 17A, U.S. History to 1865 CAN HIST 8	(3)	HIST 200, United States History	(3)
Hist. 17B, U.S. History since 1865 CAN HIST 10	(3)	HIST 201, United States History	(3)
B. OTHER HISTORY COURSES:			
Hist. 2, American Civilization	(3)	HIST 50, History of the United States	(3)
Hist. 3, U.S. History for Foreign Students	(3)	No comparable course	
Hist. 6, Asian Civilizations	(3)	No comparable course	
Hist. 7, African Civilizations	(3)	No comparable course	

(NOTE: The signatures of officials from both 4year campuses indicate that the above courses are acceptable in lieu of each other on both campuses, except for the courses noted.)

APPROVED:

Four-Year Campus X Department Chair Date

Four-Year Campus X Articulation Officer Date

Four-Year Campus Y Department Chair Date

Four-Year Campus Y Articulation Officer Date

Exceptions: _____

APPENDIX B

Diverse Numbering of Qualified Courses Identified by a CAN*

Courses listed below illustrate the diverse numbering used throughout the state. Each course has qualified to use a California Articulation Number and, therefore, may be identified by a single designation, i.e. CAN ANTH 4, CAN ECON 2, CAN HIST 8, CAN STAT 2.

CAMPUS	CAN ANTH 4 Cultural	CAN ECON 2 Macroeconomics	CAN HIST 8 U.S. History	CAN STAT 2 Statistics
CSU, Bakersfield	ANTH 100	ECON 202	HIST 231	MATH 140
CSU, Chico	ANTH 013	ECON 002	--	MATH 005
CSU, Hayward	ANTH 1300	ECON 2302	HIST 1101	STAT 1000
CSU, Long Beach	ANTH 120	ECON 100	HIST 172	MATH 180
San Diego State University	ANTH 102	ECON 101	HIST 109	--
Golden Gate University	ANTHRO 1	ECON 2	HIST 17A	MATH 40
Marymount College	ANT 120	ECO 221	HIS 120	MTH 270
Butte College	ANTH 4	ECON 2	HIST 8	MATH 18
Cañada College	ANTH 110	ECON 100	HIST 201	MATH 200
Cerritos College	ANTH 100	ECON 201	HIST 201	MATH 112
Citrus College	ANTH 210	ECON 101	HIST 107	MATH 165
City College of San Francisco	ANTH 3	ECON 1	HIST 17A	MATH 80
College of the Sequoias	ANTH 10	ECON 1	HIST 17	MATH 21
Modesto Junior College	ANTHR 102	ECON 101	HIST 101	MATH 134
Saddleback College	ANTH 2	ECON 2	HIST 16	MATH 10
San Diego City College	ANTH 103	ECON 120	HIST 109	MATH 119
San Joaquin Delta College	ANTHRO 1	ECON 1A	HIST 17A	MATH 12

*CAN: California Articulation Number

APPENDIX C

California Articulation Number Course Prefixes

The approved CAN course prefixes are listed below along with possible departments where the course may be found on a campus. For example, the Introduction to Administration of Justice course may be taught on Campus X in the department called "Law Enforcement," on Campus Y, in the department called "Criminal Justice," etc. For ease in identification, all courses qualified to use a California Articulation Number in this discipline will use the same prefix: CAN AJ. This designation will be used in addition to the campus designated prefix.

Academic Disciplines/Departments:	CAN Course Prefix*
Agriculture/Animal Science/Plant Science/Horticulture	AG
Admin. of Justice/Criminal Justice/Law Enforcement/Community Service	AJ
Anthropology	ANTH
Art	ART
Biology/Biological Sciences/Zoology/Anatomy/Botany	BIOL
Business/Accounting/Data Processing/Mathematics/Computer Programming	BUS
Chemistry	CHEM
Chinese	CHIN
Computer Science/Data Processing/Mathematics	CSCI
Drama/Theatre Arts/Dramatic Arts	DRAM
Economics/Business	ECON
English/Language/Language Arts	ENGL
Engineering	ENGR
Family and Consumer Science /Home Economics/Textiles /Art/Child Development	FCS
French	FREN
Geography	GEOG
Geology/Earth Science	GEOL
German	GERM
Government/Political Science	GOVT
History	HIST
Italian	ITAL
Japanese	JAPN
Journalism/Mass Communication/CICS: Center for Info. and Comm. Studies/English	JOUR
Kinesiology/Physical Education	KINE/PE
Mathematics	MATH
Music	MUS
Philosophy	PHIL
Physics	PHYS
Psychology	PSY
Recreation and Leisure Studies/Recreation/Physical Education	REC
Russian	RUSS
Sociology	SOC
Spanish	SPAN
Speech/Communication Studies/Communication Arts/Rhetoric	SPCH
Statistics/Mathematics	STAT

***CAN prefix abbreviations are based upon the titles of the departments in which the courses are most commonly taught.**

APPENDIX D

Approved List of Courses in the California Articulation Number System August 2002

CAN		COURSE TITLE
CAN AG	2	Ag Computers
CAN AG	4	Basic Ag Mechanics
CAN AG	6	Introduction to Animal Science
CAN AG	8	Introduction to Plant Science
CAN AG	10	Plant Propagation
CAN AG	12	Feeds and Feeding
CAN AG	14	Introduction to Soil Science
CAN AG	16	Introduction to Farm Tractors and Machinery
CAN AG	18	Ornamental Plant Identification
CAN AG	20	Introduction to Beef Cattle Science
CAN AG	22	Introduction to Sheep Science
CAN AG	24	Introduction to Swine Science
CAN AG	26	Introduction to Equine Science
CAN AG	28	Introduction to Dairy Science
CAN AJ	2	Introduction to Administration of Justice
CAN AJ	4	Introduction to Law
CAN AJ	6	Introduction to Evidence
CAN AJ	8	Introduction to Investigation
CAN ANTH	2	Introduction to Physical/Biological Anthropology
CAN ANTH	4	Introduction to Cultural Anthropology
CAN ANTH	6	Introduction to Archaeology
CAN ART	2	Survey of Art History from Prehistoric through Medieval Periods
CAN ART	4	Survey of Art History from the Renaissance to the Present
CAN ART SEQ A		Sum of the content of CAN ART 2+4
CAN ART	6	Beginning Ceramics
CAN ART	8	Beginning Drawing
CAN ART	10	Beginning Painting
CAN ART	12	Beginning Sculpture
CAN ART	14	Two-Dimensional Design
CAN ART	16	Three-Dimensional Design
CAN ART	18	Beginning Black-and-White Photography
CAN ART	20	Beginning Printmaking
CAN ART	22	Color: Theory and Practice
CAN ART	24	Beginning Life Drawing
CAN ART	26	Beginning Jewelry
CAN BIOL	2	Principles of Biology, w/lab
CAN BIOL	4	Principles of Zoology, w/lab
CAN BIOL	6	Principles of Botany, w/lab
CAN BIOL SEQ A		Sum of the content of CAN BIOL 2+4+6
CAN BIOL	10	Human Anatomy, w/lab
CAN BIOL	12	Human Physiology, w/lab
CAN BIOL SEQ B		Sum of the content of CAN BIOL 10+12

CAN		COURSE TITLE
CAN BIOL	14	Principles of Microbiology, w/lab
CAN BUS	2	Financial Accounting
CAN BUS	4	Managerial Accounting
CAN BUS SEQ A		Sum of the content of CAN BUS 2+4
CAN BUS	6	Introduction to Business Computing
CAN BUS	8	Business Law
CAN BUS	12	Legal Environment of Business
CAN BUS	22	AG Computers
CAN CHEM	1	General Chemistry for Science Majors, 1st quarter, w/lab
CAN CHEM	2	General Chemistry for Science Majors, 1st semester, w/lab
CAN CHEM	3	General Chemistry for Science Majors, 2nd quarter, w/lab
CAN CHEM	4	General Chemistry for Science Majors, 2nd semester, w/lab
CAN CHEM	5	General Chemistry for Science Majors, 3rd quarter, w/lab
CAN CHEM SEQ A		Sum of the content of CAN CHEM 1+3+5 or CAN CHEM 2+4
CAN CHEM	6	Chemistry for Allied Health Majors, 1st semester, w/lab
CAN CHEM	7	Chemistry for Allied Health Majors, 1st quarter, w/lab
CAN CHEM	8	Chemistry for Allied Health Majors, 2nd semester, w/lab
CAN CHEM	9	Chemistry for Allied Health Majors, 2nd quarter, w/lab
CAN CHEM	11	Chemistry for Allied Health Majors, 3rd quarter, w/lab
CAN CHEM SEQ B		Sum of the content of CAN CHEM 7+9+11 or CAN CHEM 6+8
CAN CHEM	12	Quantitative Analysis, w/lab
CAN CHIN	2	Elementary Mandarin, 1st semester
CAN CHIN	4	Elementary Mandarin, 2nd semester
CAN CHIN SEQ A		Sum of the content of CAN CHIN 2+4
CAN CHIN	8	Intermediate Mandarin, 1st semester
CAN CHIN	10	Intermediate Mandarin, 2nd semester
CAN CHIN SEQ B		Sum of the content of CAN CHIN 8+10
CAN CSCI	2	Computer Literacy
CAN CSCI	4	Programming in the FORTRAN Language
CAN CSCI	6	Programming in the BASIC Language
CAN CSCI	8	Programming in the COBOL Language
CAN CSCI	10	Computer Organization and Assembly Programming
CAN CSCI	12	Programming in the PASCAL Language
CAN CSCI	14	Programming in the ADA Language
CAN CSCI	16	Programming in the C Language
CAN CSCI	18	Programming in the C++ Language
CAN CSCI	20	Programming in the FORTRAN Language for Science and Engineering
CAN CSCI	22	Programming Concepts and Methodology I
CAN CSCI	24	Programming Concepts and Methodology II
CAN CSCI	26	Discrete Mathematics
CAN DRAM	6	Beginning Voice for Actors
CAN DRAM	8	Beginning Acting (for majors)
CAN DRAM	10	Lighting
CAN DRAM	12	Stagecraft
CAN DRAM	14	Stage Make-Up
CAN DRAM	16	Theatre Practicum
CAN DRAM	18	Introduction to Theatre
CAN DRAM	20	Beginning Movement
CAN DRAM	22	Acting II

CAN		COURSE TITLE
CAN ECON	2	Introduction to Macroeconomics
CAN ECON	4	Introduction to Microeconomics
CAN ENGL	1	College Composition, 1st quarter
CAN ENGL	2	College Composition, 1st semester
CAN ENGL	3	College Composition, 2nd quarter
CAN ENGL	4	College Composition and Literature, 2nd semester
CAN ENGL	5	College Composition and Literature, 3rd quarter
CAN ENGL SEQ A		Sum of the content of CAN ENGL 1+3+5 or CAN ENGL 2+4
CAN ENGL	6	Creative Writing
CAN ENGL	7	Survey of British Literature, 1st quarter
CAN ENGL	8	Survey of British Literature, 1st semester
CAN ENGL	9	Survey of British Literature, 2nd quarter
CAN ENGL	10	Survey of British Literature, 2nd semester
CAN ENGL	11	Survey of British Literature, 3rd quarter
CAN ENGL SEQ B		Sum of the content of CAN ENGL 7+9+11 or CAN ENGL 8+10
CAN ENGL	13	Survey of American Literature, 1st quarter
CAN ENGL	14	Survey of American Literature, 1st semester
CAN ENGL	15	Survey of American Literature, 2nd quarter
CAN ENGL	16	Survey of American Literature, 2nd semester
CAN ENGL	17	Survey of American Literature, 3rd quarter
CAN ENGL SEQ C		Sum of the content of CAN ENGL 13+15+17 or CAN ENGL 14+16
CAN ENGL	18	Introduction to Fiction
CAN ENGL	20	Introduction to Poetry
CAN ENGL	22	Introduction to Drama
CAN ENGR	2	Graphics
CAN ENGR	4	Engineering Materials
CAN ENGR	6	Circuits, w/lab
CAN ENGR	8	Statics
CAN ENGR	10	Surveying, w/lab
CAN ENGR	12	Circuits, w/out lab
CAN FCS	2	Nutrition
CAN FCS	4	Principles of Design
CAN FCS	6	Textiles
CAN FCS	8	Principles of Foods, w/lab
CAN FCS	10	Principles of Apparel Construction, w/lab
CAN FCS	12	Family Relations (inactive status)
CAN FCS	14	Child Development
CAN FCS	16	Life Management (inactive status)
CAN FCS	18	Interior Design Fundamentals
CAN FCS	20	Fashion Selection
CAN FCS	22	Fashion Industry and Marketing
CAN FCS	24	Child, Family & Society
CAN FCS	26	Food Science Technologies
CAN FCS	28	Cultural and Ethnic Foods
CAN FREN	1	Elementary French, 1st quarter
CAN FREN	2	Elementary French, 1st semester
CAN FREN	3	Elementary French, 2nd quarter

CAN		COURSE TITLE
CAN FREN	4	Elementary French, 2nd semester
CAN FREN	5	Elementary French, 3rd quarter
CAN FREN SEQ A		Sum of the content of CAN FREN 1+3+5 or CAN FREN 2+4
CAN FREN	7	Intermediate French, 1st quarter
CAN FREN	8	Intermediate French, 1st semester
CAN FREN	9	Intermediate French, 2nd quarter
CAN FREN	10	Intermediate French, 2nd semester
CAN FREN	11	Intermediate French, 3rd quarter
CAN FREN SEQ B		Sum of the content of CAN FREN 7+9+11 or CAN FREN 8+10
CAN GEOG	2	Introduction to Physical Geography w/out lab
CAN GEOG	4	Introduction to Human Geography
CAN GEOG	6	Introduction to Physical Geography w/lab
CAN GEOL	2	Introduction to Physical Geology w/lab
CAN GEOL	4	Historical Geology w/lab
CAN GEOL	6	Physical Geology -- Lecture only
CAN GEOL	8	Historical Geology -- Lecture only
CAN GERM	1	Elementary German, 1st quarter
CAN GERM	2	Elementary German, 1st semester
CAN GERM	3	Elementary German, 2nd quarter
CAN GERM	4	Elementary German, 2nd semester
CAN GERM	5	Elementary German, 3rd quarter
CAN GERM SEQ A		Sum of the content of CAN GERM 1+3+5 or CAN GERM 2+4
CAN GERM	7	Intermediate German, 1st quarter
CAN GERM	8	Intermediate German, 1st semester
CAN GERM	9	Intermediate German, 2nd quarter
CAN GERM	10	Intermediate German, 2nd semester
CAN GERM	11	Intermediate German, 3rd quarter
CAN GERM SEQ B		Sum of the content of CAN GERM 7+9+11 or CAN GERM 8+10
CAN GOVT	2	Introduction to American Government
CAN HIST	1	Survey of Western Civilization, 1st quarter
CAN HIST	2	Survey of Western Civilization, 1st semester
CAN HIST	3	Survey of Western Civilization, 2nd quarter
CAN HIST	4	Survey of Western Civilization, 2nd semester
CAN HIST	5	Survey of Western Civilization, 3rd quarter
CAN HIST SEQ A		Sum of the content of CAN HIST 1+3+5 or CAN HIST 2+4
CAN HIST	8	United States History
CAN HIST	10	United States History
CAN HIST SEQ B		Sum of the content of CAN HIST 8+10
CAN HIST	13	History of World Civilizations, 1st quarter
CAN HIST	14	History of World Civilizations, 1st semester
CAN HIST	15	History of World Civilizations, 2nd quarter
CAN HIST	16	History of World Civilizations, 2nd semester
CAN HIST	17	History of World Civilizations, 3rd quarter
CAN HIST SEQ C		Sum of the content of CAN HIST 13+15+17 or CAN HIST 14+16
CAN ITAL	1	Elementary Italian, 1st quarter
CAN ITAL	2	Elementary Italian, 1st semester
CAN ITAL	3	Elementary Italian, 2nd quarter
CAN ITAL	4	Elementary Italian, 2nd semester
CAN ITAL	5	Elementary Italian, 3rd quarter

CAN		COURSE TITLE
CAN ITAL SEQ A		Sum of the content of CAN ITAL 1+3+5 or CAN ITAL 2+4
CAN ITAL	8	Intermediate Italian, 1st semester
CAN ITAL	10	Intermediate Italian, 2nd semester
CAN ITAL SEQ B		Sum of the content of CAN ITAL 8+10
CAN JAPN	2	Elementary Japanese, 1st semester
CAN JAPN	4	Elementary Japanese, 2nd semester
CAN JAPN SEQ A		Sum of the content of CAN JAPN 2+4
CAN JAPN	8	Intermediate Japanese, 1st semester
CAN JAPN	10	Intermediate Japanese, 2nd semester
CAN JAPN SEQ B		Sum of the content of CAN JAPN 8+10
CAN JOUR	2	Introduction to Newswriting and Reporting
CAN JOUR	4	Introduction to Mass Communication
CAN KINE/PE	2	Introduction to Physical Education
CAN KINE/PE	4	Introduction to Athletic Training
CAN KINE/PE	6	Sports Officiating
CAN KINE/PE	8	First Aid and CPR
CAN KINE/PE	10	Water Safety Instruction
CAN KINE/PE	12	Life Guard Training
CAN MATH	2	Introduction to Mathematical Reasoning
CAN MATH	4	Mathematics for Elementary School Teaching
CAN MATH	8	Trigonometry
CAN MATH	10	College Algebra
CAN MATH	12	Finite Mathematics
CAN MATH	16	Pre-Calculus
CAN MATH	17	Calculus, 1st quarter
CAN MATH	18	Calculus, 1st semester
CAN MATH	19	Calculus, 2nd quarter
CAN MATH	20	Calculus, 2nd semester
CAN MATH	21	Calculus, 3rd quarter
CAN MATH SEQ B		Sum of the content of CAN MATH 17+19+21 or CAN MATH 18+20
CAN MATH	22	Calculus, 3rd semester
CAN MATH	23	Calculus, 4th quarter
CAN MATH SEQ C		Sum of the content of CAN MATH 17+19+21+23 or CAN MATH 18+20+22
CAN MATH	24	Differential Equations
CAN MATH	26	Linear Algebra
CAN MATH	29	Calculus for the Life and Social Sciences, 1st quarter
CAN MATH	30	Calculus for the Life and Social Sciences, 1st semester
CAN MATH	31	Calculus for the Life and Social Sciences, 2nd quarter
CAN MATH	32	Calculus for the Life and Social Sciences, 2nd semester
CAN MATH	33	Calculus for the Life and Social Sciences, 3rd quarter
CAN MATH SEQ D		Sum of the content of CAN MATH 29+31+33 or CAN MATH 30+32
CAN MATH	34	Calculus for Business
CAN MUS	2	Music Theory I
CAN MUS	4	Music Theory II
CAN MUS SEQ A		Sum of the content of CAN MUS 2+4
CAN MUS	6	Music Theory III
CAN MUS SEQ C		Sum of the content of CAN MUS 2+4+6
CAN MUS	8	Music History and Literature I
CAN MUS	10	Music History and Literature II

CAN		COURSE TITLE
CAN MUS SEQ B		Sum of the content of CAN MUS 8+10
CAN MUS	12	Music Theory IV
CAN MUS	14	Applied Music I
CAN MUS	16	Applied Music II
CAN MUS	18	Applied Music III
CAN MUS	20	Applied Music IV
CAN MUS	22	Class Piano I
CAN MUS	24	Class Piano II
CAN PHIL	2	Introduction to Philosophy
CAN PHIL	4	Introduction to Ethics
CAN PHIL	6	Introduction to Logic
CAN PHIL	7	History of Philosophy I, 1st quarter
CAN PHIL	8	History of Philosophy I, 1st semester
CAN PHIL	9	History of Philosophy I-II, 2nd quarter
CAN PHIL	10	History of Philosophy II, 2nd semester
CAN PHIL	11	History of Philosophy II, 3rd quarter
CAN PHIL SEQ A		Sum of the content of CAN PHIL 7+9+11 or CAN PHIL 8+10
CAN PHYS	2	Physics (Algebra/Trig based)
CAN PHYS	4	Physics (Algebra/Trig based)
CAN PHYS SEQ A		Sum of the content of CAN PHYS 2+4
CAN PHYS	8	Physics (Calculus based)
CAN PHYS	12	Physics (Calculus based)
CAN PHYS	14	Physics (Calculus based)
CAN PHYS SEQ B		Sum of the content of CAN PHYS 8+12+14
CAN PHYS	16	Modern Physics for Science/Engineering majors
CAN PHYS SEQ C		Sum of the content of CAN PHYS 8+12+14+16
CAN PSY	2	Introduction to Psychology
CAN PSY	6	Introduction to Statistics in Psychology
CAN PSY	8	Research Methods in Psychology
CAN PSY	10	Introductory Physiological Psychology
CAN REC	2	Introduction to Recreation
CAN REC	4	Introduction to Recreation Leadership
CAN REC	6	Recreational Use of Natural Resources
CAN REC	8	Recreation - Environment and Park Soils Management
CAN RUSS	2	Elementary Russian, 1st semester
CAN RUSS	4	Elementary Russian, 2nd semester
CAN RUSS SEQ A		Sum of the content of CAN RUSS 2+4
CAN RUSS	8	Intermediate Russian, 1st semester
CAN RUSS	10	Intermediate Russian, 2nd semester
CAN RUSS SEQ B		Sum of the content of CAN RUSS 8+10
CAN SOC	2	Introduction to Sociology
CAN SOC	4	Introduction to Social Problems
CAN SOC	6	Introduction to Statistics in Sociology
CAN SOC	8	Introduction to Research Methods
CAN SPAN	1	Elementary Spanish, 1st quarter
CAN SPAN	2	Elementary Spanish, 1st semester
CAN SPAN	3	Elementary Spanish, 2nd quarter
CAN SPAN	4	Elementary Spanish, 2nd semester

CAN		COURSE TITLE
CAN SPAN	5	Elementary Spanish, 3rd quarter
CAN SPAN SEQ A		Sum of the content of CAN SPAN 1+3+5 or CAN SPAN 2+4
CAN SPAN	7	Intermediate Spanish, 1st quarter
CAN SPAN	8	Intermediate Spanish, 1st semester
CAN SPAN	9	Intermediate Spanish, 2nd quarter
CAN SPAN	10	Intermediate Spanish, 2nd semester
CAN SPAN	11	Intermediate Spanish, 3rd quarter
CAN SPAN SEQ B		Sum of the content of CAN SPAN 7+9+11 or CAN SPAN 8+10
CAN SPCH	2	Introduction to Communication Theory
CAN SPCH	4	Introduction to Public Speaking
CAN SPCH	6	Argumentation
CAN SPCH	8	Interpersonal Communication
CAN SPCH	10	Small Group Communication
CAN STAT	2	Introduction to Statistics

APPENDIX E

Course Sequence Articulation and Approved List of Sequences

Basic, introductory courses are usually comparable and easy to articulate. However, there are instances when this is not the case. The lengths of terms, philosophical differences regarding learning theory, differences in supporting or prerequisite courses or other pedagogical reasons, variance in the order of delivery or the mode of instruction–all are examples of situations in which individual course articulation may not be the preferred method. Some subject areas, taught in course sequences, are best articulated as complete sequences. Within each year-long sequence of courses, the desired student competencies, course content, and objectives are comparable. Students are then assured of complete preparation for subsequent work in related areas.

To accommodate these variations in course articulation, sequence designations have been added to the California Articulation Number System. The following examples explain the sequence concept developed for the CAN System. In the examples, there are twelve topics which are taught in a one-year Chemistry course sequence.

Course "X" does not include the same topics or elements as the course identified as CAN CHEM 1, Course "Y" does not include the elements for CAN CHEM 3, and course "Z" does not include the elements for CAN CHEM 5. All the elements covered in CAN CHEM 1 and 3 and 5, however, are included in the courses X, Y, and Z. The same pattern may exist for semester term courses as illustrated.

Quarter Terms:

CAN CHEM 1 Topics 1,2,3,4	Course X Topics 1,2,5,9
CAN CHEM 3 Topics 5,6,7,8	Course Y Topics 3,6,8,10
CAN CHEM 5 Topics 9,10,11,12	Course Z Topics 4,7,11,12

Semester Terms:

CAN CHEM 2 Topics 1,2,3, 4,5,6	Course P Topics 1,2,3, 4,11,12
CAN CHEM 4 Topics 7,8,9, 10,11,12	Course Q Topics 5,6,7, 8,9,10

In each example box, the sequence designation, CAN CHEM SEQ A, may be used to describe the total "package" of twelve topics. The symbol ≈ should be read "acceptable in lieu of."

CAN CHEM SEQ A ≈ CAN CHEM 1+3+5 ≈ Courses X, Y, Z
CAN CHEM SEQ A ≈ CAN CHEM 2+4 ≈ Courses P+Q

CAN CHEM 1
CAN CHEM 3
CAN CHEM 5

CAN CHEM 2
CAN CHEM 4

CAN CHEM SEQ A

The examples above represent CAN CHEM SEQ A and are acceptable in lieu of each other. It must be clear to students that all the courses in the sequence must be completed before the "in lieu of" assurance is valid. In addition, campus catalogs and other publications should indicate the sequence and the courses represented by that designation.

Approved List of Sequences
in the California Articulation Number System
August 2002

CAN ART SEQ A	Designation for the sum of the content of CAN ART 2+4
CAN BIOL SEQ A	Designation for the sum of the content of CAN BIOL 2+4+6
CAN BIOL SEQ B	Designation for the sum of the content of CAN BIOL 10+12
CAN BUS SEQ A	Designation for the sum of the content of CAN BUS 2+4
CAN CHEM SEQ A	Designation for the sum of the content of CAN CHEM 1+3+5 or CAN CHEM 2+4
CAN CHEM SEQ B	Designation for the sum of the content of CAN CHEM 7+9+11 or CAN CHEM 6+8
CAN CHIN SEQ A	Designation for the sum of the content of CAN CHIN 2+4
CAN CHIN SEQ B	Designation for the sum of the content of CAN CHIN 8+10
CAN ENGL SEQ A	Designation for the sum of the content of CAN ENGL 1+3+5 or CAN ENGL 2+4
CAN ENGL SEQ B	Designation for the sum of the content of CAN ENGL 7+9+11 or CAN ENGL 8+10
CAN ENGL SEQ C	Designation for the sum of the content of CAN ENGL 13+15+17 or CAN ENGL 14+16
CAN FREN SEQ A	Designation for the sum of the content of CAN FREN 1+3+5 or CAN FREN 2+4
CAN FREN SEQ B	Designation for the sum of the content of CAN FREN 7+9+11 or CAN FREN 8+10
CAN GERM SEQ A	Designation for the sum of the content of CAN GERM 1+3+5 or CAN GERM 2+4
CAN GERM SEQ B	Designation for the sum of the content of CAN GERM 7+9+11 or CAN GERM 8+10
CAN HIST SEQ A	Designation for the sum of the content of CAN HIST 1+3+5 or CAN HIST 2+4
CAN HIST SEQ B	Designation for the sum of the content of CAN HIST 7+9+11 or CAN HIST 8+10
CAN HIST SEQ C	Designation for the sum of the content of CAN HIST 13+15+17 or CAN HIST 14+16
CAN ITAL SEQ A	Designation for the sum of the content of CAN ITAL 1+3+5 or CAN ITAL 2+4
CAN ITAL SEQ B	Designation for the sum of the content of CAN ITAL 8+10
CAN JAPN SEQ A	Designation for the sum of the content of CAN JAPN 2+4
CAN JAPN SEQ B	Designation for the sum of the content of CAN JAPN 8+10
CAN MATH SEQ B	Designation for the sum of the content of CAN MATH 17+19+21 or CAN MATH 18+20

CAN MATH SEQ C	Designation for the sum of the content of CAN MATH 17+19+21+23 or CAN MATH 18+20+22
CAN MATH SEQ D	Designation for the sum of the content of CAN MATH 29+31+33 or CAN MATH 30+32
CAN MUS SEQ A	Designation for the sum of the content of CAN MUS 2+4
CAN MUS SEQ B	Designation for the sum of the content of CAN MUS 8+10
CAN MUS SEQ C	Designation for the sum of the content of CAN MUS 2+4+6
CAN PHIL SEQ A	Designation for the sum of the content of CAN PHIL 7+9+11 or CAN PHIL 8+10
CAN PHYS SEQ A	Designation for the sum of the content of CAN PHYS 2+4
CAN PHYS SEQ B	Designation for the sum of the content of CAN PHYS 8+12+14
CAN PHYS SEQ C	Designation for the sum of the content of CAN PHYS 8+12+14+16
CAN RUSS SEQ A	Designation for the sum of the content of CAN RUSS 2+4
CAN RUSS SEQ B	Designation for the sum of the content of CAN RUSS 8+10
CAN SPAN SEQ A	Designation for the sum of the content of CAN SPAN 1+3+5 or CAN SPAN 2+4
CAN SPAN SEQ B	Designation for the sum of the content of CAN SPAN 7+9+11 or CAN SPAN 8+10

APPENDIX F

CAN – California Articulation Number System
555 University Avenue, Suite 210, Sacramento, CA 95825
(916) 274-0430 (916) 649-8260
http://wwww.cansystem.org

Articulation Report Form (F1)

REPORTING CAMPUS: _____

CAN DISCIPLINE: _____

YOUR COURSE PREFIX: _____

Purpose: To report information on courses identified for CAN

Instructions:

1. **Please duplicate this page if needed.**
2. **List ALL Courses in the discipline on one sheet.**
3. **Do not use this form for sequence designations.**
4. **Show your catalog course number and the course number on the CAN descriptor.**
5. **If you are submitting multiple pages, sign up the top page and initial remaining pages.**

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	CAN #	CAN #	CAN #	CAN #	CAN #	CAN #	CAN #	CAN #
YOUR COURSE NUMBER:								
List campuses in alpha-order below:								

Name/Title of Campus Official **Signature** **Telephone #** **E-mail address** **Date**

Form Updated 7/17/02

CAN – California Articulation Number System
555 University Avenue, Suite 210, Sacramento, CA 95825
(916) 274-0430 (916) 649-8260
http://wwww.cansystem.org

Articulation Report Form (F-SEQ)

REPORTING CAMPUS: _____

CAN DISCIPLINE: _____

YOUR COURSE PREFIX: _____

Purpose: To report information on courses identified for CAN

Instructions:

6. **Please duplicate this page if needed.**
7. **List ALL Courses in the discipline on one sheet.**
8. **Do not use this form for single course designations.**
9. **Show your catalog course number and the course number on the CAN descriptor.**
10. **If you are submitting multiple pages, sign up the top page and initial remaining pages.**

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	CAN SEQ A	CAN SEQ B	CAN SEQ C	CAN SEQ D
YOUR COURSE NUMBER:				
List campuses in alpha-order below:				

Name/Title of Campus Official **Signature** **Telephone #** **E-mail address** **Date**

Form Updated 7/11/01

APPENDIX G

Recommended Statement for Campus Catalog and Schedule of Classes

The following statement should be included in the appropriate catalog section, such as: "Admission," "Transfer," or "Course Numbering."

California Articulation Number (CAN)

The California Articulation Number (CAN) System identifies many transferable, lower division, major preparation courses commonly taught on California college and university campuses.

The system assures students that CAN courses on one participating campus will be accepted "in lieu of" the comparable CAN courses on another participating campus. For example: CAN ECON 2 on one campus will be accepted for CAN ECON 2 on every other participating campus that has also qualified CAN ECON 2. Each campus retains its own numbering system, but adds the CAN designation parenthetically in its publications.

Check with counseling offices, departmental offices, or articulation officers for current listings of CAN qualified courses. A *CAN CATALOG* listing campuses and courses is published annually in the Fall.

Recommended Placement of the CAN Designator

Class Schedule:

It is recommended that the CAN designation be placed immediately following the course title in a campus class schedule.

Campus Catalog:

There are two approved options for identifying CAN courses in campus catalogs. CAN's are either listed 1) parenthetically as part of the course title, or 2) following the course description.

EXAMPLE 1. Part of the Course Title:

1A PRINCIPLES OF ECONOMICS (CAN ECON 2) 3 UNITS

Prerequisites: None. Intermediate algebra recommended. Acceptable for credit: UC, CSU. Three hours lecture.

EXAMPLE 2. Following the Course Description:

Describes the interaction among households, business, and governmental sectors; relates the link between money, interest rates, governmental taxation and expenditure in determining the levels of output, employment, prices, and income. (CAN ECON 2)

EXAMPLE 3. This Location is *Not* Approved:

Describes the interaction among households, business, and governmental sectors; relates the link between money, interest rates, governmental taxation and expenditure in determining the levels of output, employment, prices, and income. Transfer Credit: CSU, UC. (CAN ECON 2)

APPENDIX H

A Glossary of Commonly Used CAN Terms

"CAN"	"California Articulation Number" System
"Identified"	Term used to designate courses a campus has notified the CAN System Office they wish to include in the CAN System for possible qualification.
"Qualified"	Term used to designate courses that have completed the bi-lateral articulation process with four 4-year campuses that results in receiving a "CAN" designation.
"RFV"	"Request for Verification." The form/process by which four-year campuses "verify" to the CAN System Office that articulation reported with their campus is in place and valid.
"Bi-lateral"	Reciprocal. Faculty from both campuses agree on the articulation that has been established.
"Sequence"	A combination of two (or more courses) required to meet the content requirement of the CAN SEQ descriptor.
"F1 Form"	The form (available on line) used to report course-to-course articulation to the CAN System Office.
"F-SEQ Form"	The form (available on line) used to report articulation for sequences of courses to the CAN System Office.
"Reporting Campus"	A campus that has forwarded an articulation report to the CAN System Office (F1, F-SEQ).
"Qualifying Campus"	A campus that has met the criteria to carry a CAN designation on one or more courses.
"Participating Campus"	A campus that has a signed "Statement of Commitment" on file at the CAN System Office. A "participating campus" agrees to accept and use CAN-qualified courses in lieu of it's own courses designated by the same CAN.
"Status Report"	A comprehensive report (available on line) that lists the articulation a campus has reported to CAN, and the "status" of that articulation.
"Status Codes"	Alphabetic codes used in the "Status Report" to indicate the "status" of each instance of articulation, and the "status" of the course qualification process ("codes" and definitions available on line).
"CAN Guide"	The CAN "Handbook." Contains detailed explanation of CAN, how it works, steps to participate, model course descriptions, etc.
"CAN Catalog"	Contains comprehensive list of CAN "qualified" courses from all participating campus.

APPENDIX I

CAN BRIEFS

Information about the California Articulation Number System

The California Articulation Number (CAN) System is a cross-reference course numbering system designed to identify courses of comparable content, maintain standards of academic rigor for those courses, and insure their transfer between and among participating institutions. The System streamlines the articulation process by eliminating the need for every campus in the State to articulate their courses with every other campus in order to provide needed transfer and articulation information to prospective transfer students.

The CAN System is based on the development of formal, written faculty approved articulation agreements between campuses. In order to qualify to use a CAN identifier, each course, at both two- and four-year campuses, must be formally articulated with four California public four-year institutions. Once the articulation has been developed and bilaterally approved, the course qualifies to carry a "CAN." Qualifying to carry a CAN identifier on a course 1) entitles the campus to automatic articulation with all other campuses who have also qualified to use that CAN, whether or not they have developed articulation directly with that campus, and 2) requires the campus to accept courses in transfer from all other campuses that have also qualified to use that CAN, whether or not they have developed articulation directly with that campus.

CAN became an official intersegmental program on July 1, 1985 and has remained a joint effort of the California Community Colleges and the California State University, with both system-wide offices providing joint administrative oversight for the program. The CAN Board of Directors, comprised of Articulation Officers, faculty, and system-wide representatives from the California Community Colleges, the California State University, and the private/independent sector, formulate policy and monitor the implementation of the program statewide.

All courses included in the number system are lower-division, transferable courses commonly offered on most college campuses. Upper-division and non-baccalaureate-level courses are not included in the system.

The CAN System has developed a comprehensive "Guide" which explains in detail how the system works. The Guide contains a list of the disciplines included in the system and course descriptions for each course, and provides detailed instructions for the use of, and participation in, the CAN System. A catalog of approved CAN courses is published and distributed once a year. Requests for copies of the Guide, catalogs, as well as inquiries and questions about the number system, may be directed to the program headquarters.

- A basic premise of the System is that courses are acceptable "in lieu of" each other, not necessarily "equivalent" or "identical" in content.
- The use of a California Articulation Number denotes faculty-approved articulation, that the criteria to qualify each course have been met, and the campus has affirmed its commitment to articulation and the California Articulation Number System.
- Each campus retains and uses its own course number, prefix, and title; each participating campus adds the appropriate prefix and CAN when it has qualified the course.

- The System is designed to enhance articulation efforts statewide and demystify the multiple numbering of lower division major preparation courses.
- The System currently has 207 semester unit courses, fifty-two quarter unit courses, and thirty-six sequences. It may be expanded as the need arises.
- Any two- or four-year accredited institution of higher education in the state of California may qualify courses to participate in the intersegmental system.
- *A Guide for the California Articulation Number System* provides comprehensive instructions for the System.
- The *CAN Catalog of Courses* provides a listing of qualified courses and participating campuses. It is published annually.
- A newsletter, *CAN DIGEST*, provides general information about the status of the System.

THE GOALS OF THE CALIFORNIA ARTICULATION NUMBER SYSTEM ARE TO SIMPLIFY THE CONFUSING AND MYSTIFYING MULTIPLE COURSE NUMBERING SYSTEMS FACING STUDENTS, FACULTY, AND COUNSELORS, TO MAKE THE TRANSFER PROCESS EASIER, AND SIMULTANEOUSLY LEAD TO INCREASED AND IMPROVED ARTICULATION THROUGHOUT CALIFORNIA.

Please feel free to duplicate this information sheet. If you would like copies of the *GUIDE*, the *CAN Catalog of Courses*, to be placed on the mailing list, or assistance, please contact:

California Articulation Number System Office
555 University Ave., Suite 210
Sacramento, CA 95825

(916) 274-0430
FAX: (916) 649-8260

APPENDIX J

Course Descriptions for Agriculture Courses in the California Articulation Number System

CAN AG 2 Ag Computers

Applied microcomputing for agribusiness management. Evaluation of alternative microcomputing systems and software. Use of word processing, spreadsheet, and database management programs; applications to agricultural enterprise management and agricultural financial planning.

CAN AG 4 Basic Ag Mechanics

Description not available.

CAN AG 6 Introduction to Animal Science

A scientific overview of livestock and poultry; highlights anatomy and physiology, reproduction, nutrition, behavior, health, and marketing; pertinent environmental and social issues, to include animal welfare. Includes human opportunity to influence trait inheritance, population densities, and productivity. Laboratory recommended

CAN AG 8 Introduction to Plant Science

Introduction to and application of principles of plant science to production of cultivated crops; including how yield and quality are affected by breeding, propagation, culture, harvesting, storage, and marketing. Laboratory required.

CAN AG 10 Plant Propagation

Principles and methods of propagating plants, sexual and asexual: field crops, fruits, vegetables, ornamentals, seeds, spores, cuttings, layering, grafting and budding. Propagation media and rooting aids. Laboratory required.

CAN AG 12 Feed and Feeding

Composition and selection of feeds; characteristics of nutrients; principles of nutrition; nutrient requirements of non-ruminant and ruminant animals; and formulating diets to meet these requirements.

CAN AG 14 Introduction to Soil Science

Biological, chemical, physical and mineralogical soil properties. Interpretation of soils information for agricultural management and production. Proper land use and conservation; soil and water management. Laboratory required.

CAN AG 18 Ornamental Plant Identification

Classification, nomenclature, and identification of common tress, vines, shrubs, ground covers, turf grasses, bedding plants, and house plants. Characteristics of important plant families are discussed. Laboratory required.

Course descriptions developed by an intersegmental Agricultural faculty committee, April 1992. Reviewed Spring 1997 and Spring 2002

CAN AG 20 Introduction to Beef Cattle Science

A study of the beef cattle industry emphasizing the importance of breeds, selection, evaluation, nutrition, breeding principles, disease control, equipment, facilities, and marketing. Laboratory recommended.

CAN AG 22 Introduction to Sheep Science

A study of the sheep industry emphasizing the importance of breeds, selection, evaluation, nutrition, breeding principles, disease control, equipment, facilities, and marketing. Laboratory recommended.

CAN AG 24 Introduction to Swine Science

A study of the swine industry emphasizing the importance of breeds, selection, evaluation, nutrition, breeding principles, disease control, equipment, facilities, and marketing. Laboratory recommended.

CAN AG 26 Introduction to Equine Science

A study of the horse industry emphasizing the importance of breeds, selection, evaluation, nutrition, breeding principles, disease control, equipment, facilities, and marketing. Laboratory recommended.

CAN AG 28 Introduction to Dairy Science

Description not available.

Course descriptions developed by an intersegmental Agricultural faculty committee, April 1992. Reviewed Spring 1997 and Spring 2002

Course Descriptions for Anthropology Courses in the California Articulation Number System

CAN ANTH 2 Introduction to Physical/Biological Anthropology

This course is an introduction to the study of human evolution and human biological variation. The course typically includes paleoanthropology, primatology, principles of genetics and population genetics. It may also include topics such as biocultural adaptation, bioethics, and critique of the concept of race.

CAN ANTH 4 Introduction to Cultural Anthropology

This course is an introduction to the study of culture and the basic concepts, theories, and methods used in the comparative study of sociocultural systems. The course typically includes subjects such as subsistence patterns, social and political organization, language and communication, family and kinship, religion, the arts, social inequality, ethnicity, gender, culture change and the application of anthropological perspectives to contemporary issues.

CAN ANTH 6 Introduction to Archaeology

This course is an introduction to the study of concepts, theories, and methods of anthropological archaeology and a review of significant data and models that contribute to knowledge of the human past. The course typically includes a discussion of the history and interdisciplinary nature of archaeological research; dating techniques and methods of survey, excavation, and analysis; cultural resource management; and selected cultural sequences.

Course descriptions developed by an intersegmental Anthropology faculty committee, March 1993.

Course Descriptions for Art Courses in the California Articulation Number System

CAN ART 2 Survey of Art History from Prehistoric through Medieval Periods

An analysis of Prehistoric, Mesopotamian, Egyptian, Greek, Roman, Early Christian, Islamic, and Medieval art that may include a multicultural component.

CAN ART 4 Survey of Art History from the Renaissance to the Present

An analysis of Renaissance, Baroque, 19th, and 20th century art that may include a multicultural component.

CAN ART SEQ A Sum of the content of CAN ART 2+4

CAN ART 6 Beginning Ceramics

Studio experiences with basic ceramic techniques and methods. Recommended: 6 contact hours for 3 units.

CAN ART 8 Beginning Drawing

A basic course in drawing and composition to develop the ability to perceive and define shape, contour, volume, space, and light using a variety of media and subject matter. Recommended: 6 contact hours for 3 units.

CAN ART 10 Beginning Painting

An introduction to painting in various media, developing concepts of pictorial space, composition, and color. Recommended: 6 contact hours for 3 units.

CAN ART 12 Beginning Sculpture

An introduction to the concepts, materials, and techniques of sculpture. Recommended: 6 contact hours for 3 units.

CAN ART 14 Two-Dimensional Design

Theories and applications of two-dimensional composition in the visual arts using the elements of line, shape, texture, value, and color. Recommended: 6 contact hours for 3 units.

CAN ART 16 Three-Dimensional Design

Theories and applications of three-dimensional form in the visual arts using the elements of line, plane, mass, and volume. Recommended: 6 contact hours for 3 units.

CAN ART 18 Beginning Black-and-White Photography

Basic principles and darkroom techniques of black-and-white photography in a fine art context. Recommended: 6 contact hours for 3 units.

Course descriptions developed by an intersegmental Art faculty committee, March 1992. Reviewed Spring 1995.

CAN ART 20 Beginning Printmaking

Studio experiences in basic printmaking concepts, materials, and methods. Recommended: 6 contact hours for 3 units.

CAN ART 22 Color: Theory and Practice

Study and use of color as an element of art and design. Recommended: 6 contact hours for 3 units.

CAN ART 24 Beginning Life Drawing

A basic course in figure drawing, experimentation leading toward understanding of form, structure, and proportions of the human figure as they apply to visual expression. Recommended: 6 contact hours for 3 units.

CAN ART 26 Beginning Jewelry

An introduction to the concepts, techniques, and tools used in the design and fabrication of jewelry. Recommended: 6 contact hours for 3 units.

Course descriptions developed by an intersegmental Art faculty committee, March 1992. Reviewed Spring 1995.

Course Descriptions for Biology Courses in the California Articulation Number System

CAN BIOL 2 Principles of Biology

Principles of prokaryotic and eukaryotic cell structure and function, Mendelian and molecular genetics, and concepts that integrate cellular and organismal activities. Lecture/lab.

CAN BIOL 4 Principles of Zoology

The study of animal structure, function, development, evolution, phylogeny, ecology and behavior. Lecture/lab.

CAN BIOL 6 Principles of Botany

The study of plant structure, function, development, evolution, phylogeny and ecology. Lecture/lab.

CAN BIOL SEQ A: Sum of the content of CAN BIOL 2+4+6

CAN BIOL 10 Human Anatomy

The study of the gross and microscopic structure of the human body. Lecture/lab. Recommended: One college level course in Biology.

CAN BIOL 12 Human Physiology

Study of the function, integration, and homeostasis of organ systems. Lecture/lab. Recommended: One college level course each in Anatomy and Chemistry.

CAN BIOL SEQ B: Sum of the content of CAN BIOL 10+12

CAN BIOL 14 Principles of Microbiology

The study of morphology, physiology, genetics, taxonomy and ecology of micro-organisms; principles of immunology, the control of microbes and their relationship to disease will be included. Lecture/lab. Prerequisite: One college level course each in Biology and Chemistry.

Course descriptions developed by an intersegmental Biology faculty committee, May 1990. Reviewed Fall 1992, Spring 1995 and Spring 1999.

Course Descriptions for Business Courses in the California Articulation Number System

CAN BUS 2 Financial Accounting

Fundamental financial accounting principles, concepts, and procedures as the basis of an information system; data accumulation, preparation and analysis of financial statements and reports for decision making.

CAN BUS 4 Managerial Accounting

Fundamental managerial accounting concepts, classifications, cost systems, and budgeting for the analysis and reporting of accounting information for planning, control, and decision making. Prerequisite: CAN BUS 2.

CAN BUS 6 Business Information Systems

This course covers basic computer concepts including: components of a computer system (CPU, memory, ports, buses, input/output devices, etc.), operating systems and utility programs (Windows, Virus Protection Software, etc.), an overview of commonly used application software programs (word processing, spreadsheets, data base, entering data, querying a data base, etc.), communication and network (LAN, WAN, wiring, modems, security, firewalls, etc.), information systems development (systems, development life cycle, analysis, design, implementation, and support, etc.), ethical issues, and usage of the Internet (the World Wide Web, using a browser, search engines, and communicating via E-mail). The course will expose students to applications of information systems to business.

The course will also cover the use of spreadsheets and cover concepts such as entering data, cell operations, formatting the worksheet (changing column, row, and cell sizes, font size, color, etc.), using functions (Average, Max, Min, Sum, IF, Round), what-if analysis/goal seek, copying/pasting/inserting/deleting data, absolute versus relative addresses, charting data, adding text to the worksheet, linking worksheets, protecting data, and printing options.

Desirable coverage also includes the following. Exposure to word processing topics such as creating and saving documents; using a spell checker; selecting, inserting, and deleting text and objects; application integration; and formatting text. Exposure to data base software concepts such as entering and editing data and records; defining fields; creating and saving tables, forms, queries, and reports; and sorting data. Exposure to presentation software such as PowerPoint.

CAN BUS 8 Business Law

Law and its relationship to business. Concepts and cases involving the legal system, dispute resolution, torts, contracts and other areas of commercial law.

CAN BUS 12 Legal Environment of Business

Laws and regulations affecting managerial decisions; legal concepts and case analyses in the areas of ethics, employment, consumer transactions, competition, the environment, business torts and crimes, contracts, agency and business organizations.

CAN BUS SEQ A: Sum of the content of CAN BUS 2+4

Course descriptions developed by an intersegmental Business faculty committee, May 1990. Reviewed Spring 1995

Course Descriptions for Chemistry Courses in the California Articulation Number System

CAN CHEM 1 General Chemistry for Science Majors with Lab, 1st Quarter

No Description Available

CAN CHEM 2 General Chemistry for Science Majors with Lab, 1st semester

A presentation of fundamental principles and concepts of chemistry. Prerequisite: 2 years of high school algebra; high school chemistry and physics recommended.

CAN CHEM 3 General Chemistry for Science Majors with Lab, 2nd Quarter

No Description Available

CAN CHEM 4 General Chemistry for Science Majors with Lab, 2nd semester

A continuation of the presentation of fundamental principles and concepts of chemistry. Prerequisite: CAN CHEM 2.

CAN CHEM 5 General Chemistry for Science Majors with Lab, 3rd Quarter

No Description Available

CAN CHEM SEQ A: Sum of the content of CAN CHEM 1+3+5 or CAN CHEM 2+4

General Chemistry for Science Majors with Lab

The complete sequence will present fundamental principles and concepts of chemistry including, but not limited to atomic structure, periodic properties, stoichiometry, gas laws, molecular structure and bonding, states of matter, acids and bases, chemical equilibrium, thermodynamics, electro-chemistry and chemical kinetics. The laboratory sequence will include both qualitative and quantitative experiments.

CAN CHEM 6 Chemistry for Allied Health Majors with Lab, 1st semester

A presentation of the principles of chemistry and scientific methods for students who do not plan advanced study in science.

CAN CHEM 7 Chemistry for Allied Health Majors with Lab, 1st Quarter

No Description Available

CAN CHEM 8 Chemistry for Allied Health Majors with Lab, 2nd semester

An introduction to organic and biological chemistry for students who do not plan advanced study in science.

Prerequisite: CAN CHEM 6.

CAN CHEM 9 Chemistry for Allied Health Majors with Lab, 2nd Quarter

No Description Available

CAN CHEM 11 Chemistry for Allied Health Majors with Lab, 3rd Quarter

No Description Available

CAN CHEM SEQ B: Sum of the content of CAN CHEM 7+9+11 or CAN CHEM 6+8

CAN CHEM 12 Quantitative Analysis with Lab

The practice and theory of wet chemical methods and an introduction to instrumental methods of analysis with a focus on precision and accuracy of experimental data. Prerequisites: CAN CHEM 1+3+5 or CAN CHEM 2+4 or CAN CHEM SEQ A.

Course descriptions developed by an intersegmental Chemistry faculty committee, October 1990. Reviewed Spring 1992, Spring 1995 and Spring 1999.

Course Descriptions for Chinese Courses in the California Articulation Number System

CAN CHIN 2 Elementary Mandarin, 1st semester

Course emphasis is on listening, speaking, and reading. Course goals include development of the first stage of language competency which includes the following content areas: basic vocabulary and formulaic expressions such as greetings, introductions, family members, basic objects in the classroom, at home, and in the immediate environment, as well as daily activities in frequently occurring situations. Language functions developed enable students to communicate with learned words, phrases and expressions, to develop basic functional skills, to greet, introduce, ask and answer questions, make suggestions, and tell about objects, events and situations in simple oral or written discourse. Students develop the ability to perform communicative tasks using learned expressions and to create with the language and to respond in culturally appropriate manners. First stage of accuracy emphasizes vocabulary, pronunciation, and orthography, with success measured by communication through interaction with a very sympathetic listener/reader. Reading competency is assessed with authentic materials so that students can recognize a small set of frequently encountered characters and compounds in public writing and certain pictographic characters with increasing awareness of the recurrence of some of them as component radicals in other characters as well as names of certain countries on a map. Students are able to read a name card and labels of certain every day products, a clearly printed greeting card, as well as other frequently occurring texts. Prerequisite: None. Competency Goal: Statement on Competencies Stage 1.2 Reading and Writing; 1.3 Listening and Speaking. ACTFL: Novice Mid to Novice High.

CAN CHIN 4 Elementary Mandarin, 2nd semester

Course emphasis is on listening, speaking, and reading. Course goals include development of control of basic content areas and language functions which enable the student to participate in short conversations on every day events. As students move into stage 2 competency, the content areas and the functions they acquire expand to include the following: foods/ restaurants, shopping/making purchases, numbers (up to 1000), money matters, comparisons, making appointments on the phone, personal/biographical information, professions/occupations, nationalities, transportation, time, and asking and giving directions. Language functions enable students to ask and answer questions, provide descriptions, apply learned material to new situations, participate in short conversations, and get into, through, and out of simple situations. Reading competency improves with in- and out-of-class practice using authentic materials. Students are able to puzzle out the time and place of a meeting or movie in a posted announcement, are able to follow a simple map and directions written in characters, can comprehend simple hand printed messages in characters about every day events, can read a short simple letter which may contain certain greetings, forms of address, and queries about well-being. Prerequisite: CAN CHIN 2 or Statement on Competencies Stage 1.2 Reading, Writing, Listening, and Speaking. Competency Goal: Statement on Competencies Stage 1.3 Reading and Writing; 2.1 Listening and Speaking. ACTFL: Novice Mid to Intermediate Low.

CAN CHIN SEQ A: Sum of the content of CAN CHIN 2+4 - 10 semester units/year required.

Course descriptions developed by Chinese faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993.

CAN CHIN 8 Intermediate Mandarin, 1st semester

Course emphasis is on listening, speaking, and reading. Students expand their competency to adapt successfully to new situations and to move from concrete to abstract topics. Content areas expand beyond the immediate environment to understand a wider range of topics including: current events, travel, leisure, entertainment, and some areas of business and economics. Language functions enable students to understand a wider variety of spoken and written texts dealing with a broader spectrum of both Chinese and American culture and develop competence in understanding descriptions and narrations that relate not only to the present but to the future and the past. Accuracy becomes quite high in high frequency structures and vocabulary but more complex discourse is still quite halting and requires a somewhat sympathetic listener or reader. Reading competency expands from reading at the word level to reading lines in context and understanding main ideas and some facts from sentences of high frequency characters. Students understand a simple telephone message, answer questions about the content of a personal note which informs them of a weekend activity on campus, the qualifications specified in a job announcement, and comprehend a beginning paragraph of a news report in a local Chinese newspaper containing information about when, where, what, who, and why. Prerequisite: CAN CHIN 4 or Statement on Competencies Stage 1.3 Reading, Writing, Listening, and Speaking. Competency Goals: Statement on Competencies Stage 2.1 Reading and Writing; 2.2 Listening and Speaking. ACTFL: Intermediate Low to Intermediate Mid.

CAN CHIN 10 Intermediate Mandarin, 2nd semester

Course emphasis is on listening, speaking, reading and writing. Course goals include development of the ability to adapt successfully to new situations and accomplish problem solving tasks in the setting of Chinese culture. Content areas enable students to understand a wide variety of spoken and written texts dealing with a broader spectrum of both Chinese and American culture. Language functions enable understanding and participation in discussions on topics including current events, academic issues, general social concerns, and some areas of education, politics, business, and economics. Accuracy focuses on increasing control of content and sustained control of culturally appropriate language so that there is a wider range of appropriate language which requires increasingly less of a sympathetic listener/reader. Students understand a beginning paragraph of a news report in a local Chinese newspaper, a short paragraph describing a school event, a paragraph introducing activities for a main Chinese holiday, and some paragraphs of a pamphlet describing one of the scenic spots in China. Prerequisite: CAN CHIN 8 or Statement on Competencies Stage 2.1 Reading, Writing, Listening, and Speaking. Competency Goals: Statement on Competencies Stage 2.2 Reading and Writing; 2.3 Listening and Speaking. ACTFL: Intermediate Mid.

CAN CHIN SEQ B: Sum of the content of CAN CHIN 8+10 - 10 semester units/year required.

Course descriptions developed by Chinese faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993. Reviewed by intersegmental Chinese faculty committee Spring 1998.

Course Descriptions for Computer Science Courses in the California Articulation Number System

CAN CSCI 2 Computer Literacy

A beginning computer course which includes computer hardware, software, terminology, ethics and societal impact. Students will become familiar with operating systems, word processing, spread sheets, database management systems, telecommunications and networks.

CAN CSCI 4 Programming in the FORTRAN Language

Syntax, control and data structures. Software life-cycle including design, development, styles, documentation, testing and maintenance, case studies and software projects. Prerequisite: Intermediate Algebra.

CAN CSCI 6 Programming in the BASIC Language

Syntax, control and data structures. Software life-cycle including design, development, styles, documentation, testing and maintenance, case studies and software projects.

CAN CSCI 8 Programming in the COBOL Language

Syntax, control and data structures. Software life-cycle including design, development, styles, documentation, testing and maintenance, case studies and software projects. Critical features of the language include COBOL divisions, data definition, perform statement, tables, file creation and maintenance, sorting, control-breaks, subroutines and sub-programs.

CAN CSCI 10 Computer Organization and Assembly Language Programming

Functional organization of digital computers and low level programming; internal representation of data, binary arithmetic, machine instructions, addressing modes, subroutine linkage, macros and interrupts, assembly language programming assignments. Prerequisite: Programming Concepts and Methodology I.

CAN CSCI 12 Programming in the PASCAL Language

Syntax, control and data structures. Software life-cycle including design, development, styles, documentation, testing and maintenance, case studies and software projects. Critical features of the language include arrays, functions, procedures, records and files.

CAN CSCI 14 Programming in the ADA Language

Syntax, control and data structures. Software life-cycle including design, development, styles, documentation, testing and maintenance, case studies and software projects. Critical features of the language include packages, tasking, generics and exception-handling. Prerequisite: Experience in a programming language.

Course descriptions developed by an intersegmental Computer Science faculty committee, April 1992. Reviewed Spring 1995.

CAN CSCI 16 Programming in the C Language

Syntax, control and data structures. Software life-cycle including design, development, styles, documentation, testing and maintenance, case studies and software projects. Critical features of the language include arrays, functions, pointers, structures, files. Prerequisite: Intermediate Algebra.

CAN CSCI 18 Programming in the C++ Language

Syntax, control and data structures. Software life-cycle including design, development, styles, documentation, testing and maintenance, case studies and software projects. Critical features of the language include objects, encapsulations, inheritance and polymorphism. Introdúction to object-oriented design. Prerequisite: Programming in the C Language.

CAN CSCI 20 FORTRAN Language Programming for Science and Engineering
(Co-requisite: Calculus)

Syntax, control and data structures. Software life-cycle including design, development, styles, documentation, testing and maintenance, case studies and software projects. Critical features of the language include numerical techniques for scientific and engineering applications.

CAN CSCI 22 Programming Concepts and Methodology I

Introduces the discipline of computer science using a high level language; provides an overview of computer organization and an introduction to software engineering. Topics include methodologies for program design, development, style, testing, and documentation; algorithms, control structures, sub-programs, and elementary data structures. Prerequisite: Intermediate Algebra.

CAN CSCI 24 Programming Concepts and Methodology II

Application of software engineering techniques to the design and development of large programs; data abstraction and structures and associated algorithms. Topics include lists, stacks, queues, trees, searching, sorting, recursion. Prerequisite: Programming Concepts and Methodology I.

CAN CSCI 26 Discrete Mathematics for Computer Science

Elements of discrete mathematics which have applications to computer science; methods of proof including mathematical induction. Topics include logic, sets, relations, graphs, trees, combinatorics and Boolean algebra. Prerequisite: Pre-calculus.

Course descriptions developed by an intersegmental Computer Science faculty committee, April 1992. Reviewed Spring 1995.

Course Descriptions for Drama Courses in the California Articulation Number System

CAN DRAM 6 Beginning Voice for Actors

Techniques of voice production for the stage. Theory and practice in developing vocal skills for performance.

CAN DRAM 8 Beginning Acting (for majors)

Acting techniques with emphasis on the ability to express thought, emotion and character through the effective use of voice, movement and script analysis.

CAN DRAM 10 Lighting

Theory and practice of modern stage lighting, color, instruments and control. Lecture/lab.

CAN DRAM 12 Stagecraft

An introduction to the theory and practice of stagecraft including construction techniques, painting, properties, and rigging; knowledge of tools, equipment and shop safety. Lecture/lab.

CAN DRAM 14 Stage Make-up

An introduction to the theory, design and application of make-up for the theatre. Lecture/lab.

CAN DRAM 16 Theatre Practicum

Supervised practical experience in the preparation and performance of theatre productions.

CAN DRAM 18 Introduction to Theatre

An introduction to the art of theatre to include the nature of theatrical presentation, elements of dramatic structure and the contributions of the playwright, actor, director, designer, technician and audience.

CAN DRAM 20 Beginning Movement

Theory and practice of stage movement developing the body as an expressive instrument acquiring flexibility, relaxation, control and creative expression.

CAN DRAM 22 Acting II

In depth application of the techniques explored in beginning acting with emphasis on characterization and scene study. Prerequisite: Beginning Acting or equivalent.

Course Descriptions for Economics Courses in the California Articulation Number System

CAN ECON 2 Principles of Macroeconomics

This is an introductory course focusing on aggregate economic analysis. Topics include market systems; economic cycles including recession, unemployment and inflation; national income accounts; macroeconomic equilibrium; money and financial institutions; monetary and fiscal policy; international trade and finance. Related topics such as industrial policy, economic development and income distribution may be included.

CAN ECON 4 Principles of Microeconomics

This is an introductory course focusing on choices of individual economic units. Topics include scarcity, opportunity costs, comparative advantage, supply, demand, elasticity, cost theory, price and output determination under various market structures and factor markets. Related topics such as international trade, public choice, income distribution, externalities and government regulation may be included.

Course descriptions developed by an intersegmental Economics faculty committee, March 1993. Reviewed Spring 1998.

Course Descriptions for Engineering Courses in the California Articulation Number System

CAN ENGR 2 Graphics

The principles of orthographic drawing, pictorial drawing, and descriptive geometry and their application to the visualization, representation, analysis, solution, and documentation of engineering problems, using freehand sketching, instrument drawing, and computer aided drafting. Additional topics may include, but are not limited to: detail and assembly drawings; dimensioning standards and techniques; graphical mathematics; vector analysis; charts, graphs, and diagrams.

CAN ENGR 4 Engineering Materials

An introductory course on the properties of engineering materials and their relation to the internal structure of materials. Topics include: atomic structure and bonding; crystalline structures; phases and phase diagrams; metals; polymers; ceramics; composites; mechanical deformation and fracture; structural control and influence of properties; materials naming and designating systems; electrical properties, magnetic properties. Additional topics may include: optical properties, corrosion and process methods. A minimum of 3 semester (4 quarter) units, a laboratory, with written reports, is usually included. Prerequisites: A course in college-level chemistry and a calculus-based physics course which includes mechanics.

CAN ENGR 6 Circuits with Lab

An introductory course emphasizing the solutions of the equations arising from the applications of Kirchhoff's Laws and Thevinen's Theorem to d-c and a-c circuits. Topics include mesh and nodal analysis, periodic forcing functions, phasors, frequency response, resonant circuits, natural and complete response, analog signal systems, dependent sources, and the characteristics of operational amplifiers. Additional topics may include non-linear circuit elements, instrumentation and measurements, circuit approximations at high and low frequencies, three-phase circuits, impedance-matching, and digital building blocks. A minimum of 3 semester (4 quarter) units. Prerequisite: A calculus-based physics course which includes electricity and magnetism. Corequisite: Circuits Laboratory. A selection of experiments chosen to achieve the following goals: a) provide concrete experiences with, and examples of, theoretical concepts covered in the circuits course; b) provide confirmation of the essential correctness of the analytical methods discussed in the circuits course; c) provide examples of the limitations of the idealized models presented in lecture; and d) provide broad experience using the test and measurement devices utilized in the field of electrical circuits. A minimum of 1 semester (1 quarter) unit.

CAN ENGR 8 Statics

The study of rigid bodies in static equilibrium when acted upon by forces and couples in 2 and 3 dimensional space. Included are equilibrium of rigid bodies, trusses, frames and machines, as well as the calculation of centers of mass, centroids, friction and moments of inertia. Additional topics which may be covered include distributed forces in cables, beams, and fluid statics, mass moments of inertia, and virtual work. Meets a minimum of three lecture hours per week; 3 semester (4 quarter) units. Prerequisite: A calculus-based physics course which includes mechanics.

Course descriptions developed by the intersegmental Engineering Liaison Committee, received in the CAN Office November 1990. Reviewed Spring 1995.

CAN ENGR 10 Surveying

Surveying fundamentals including the use and care of surveying instruments such as: steel tape, engineer's level and transit/theodolite. Applications include horizontal and vertical measurements, layout and traverse and area computations. Surveying mapping is introduced. Additional topics may include legal descriptions and public land surveying. A minimum of 3 semester (4 quarter) units; 2 units of lecture, 1 unit of laboratory. Prerequisite: Trigonometry.

CAN ENGR 12 Circuits without Lab

An introductory course emphasizing the solutions of the equations arising from the applications of Kirchhoff's Laws and Thevinen's Theorem to d-c and a-c circuits. Topics include mesh and nodal analysis, periodic forcing functions, phasors, frequency response, resonant circuits, natural and complete response, analog signal systems, dependent sources, and the characteristics of operational amplifiers. Additional topics may include non-linear circuit elements, instrumentation and measurements, circuit approximations at high and low frequencies, three-phase circuits, impedance-matching, and digital building blocks. A minimum of 3 semester (4 quarter) units. Prerequisite: A calculus-based physics course which includes electricity and magnetism.

Course descriptions developed by the intersegmental Engineering Liaison Committee, received in the CAN Office November 1990. Reviewed Spring 1995.

Course Descriptions for English Courses in the California Articulation Number System

CAN ENGL 2 College Composition

A course in expository writing that includes argument or persuasion, techniques of research, and a substantial reading component; minimum writing requirement of 5,000 words in a number of essays of varying lengths.

CAN ENGL 4 College Composition and Literature

An expository writing course based on reading and analysis of fiction, poetry, and drama; minimum writing requirement of 5,000 words in a number of essays of varying lengths. Prerequisite: College Composition.

Quarter courses may be identified as CAN ENGL 1, 3, 5.

CAN ENGL SEQ A: Sum of the content of CAN ENGL 1+3+5 or CAN ENGL 2+4

CAN ENGL 6 Creative Writing

An introductory course in writing fiction, poetry, and/or drama.

CAN ENGL 8 Survey of British Literature

A study of British writers and their relationship to major literary and intellectual movements from the Old English period through the 18th century. Prerequisite: College Composition.

CAN ENGL 10 Survey of British Literature

A study of British writers and their relationship to major literary and intellectual movements of the 19th and 20th centuries. Prerequisite: College Composition.

Quarter courses may be identified as CAN ENGL 7, 9, 11.

CAN ENGL SEQ B: Sum of the content of CAN ENGL 7+9+11 or CAN ENGL 8+10

CAN ENGL 14 Survey of American Literature

A study of American writers and their relationship to major literary and intellectual movements from the beginnings through the Civil War. Prerequisite: College Composition.

CAN ENGL 16 Survey of American Literature

A study of American writers and their relationship to major literary and intellectual movements from the Civil War to the present. Prerequisite: College Composition.

Quarter courses may be identified as CAN ENGL 13, 15, 17.

CAN ENGL SEQ C: Sum of the content of CAN ENGL 13+15+17 or CAN ENGL 14+16

CAN ENGL 18 Introduction to Fiction

A study of short stories and/or novels with emphasis on critical reading, analysis, and interpretation. Prerequisite: College Composition.

Developed by the intersegmental English faculty committee, April 1990. Reviewed Spring 1995.

CAN ENGL 20 . Introduction to Poetry

A study of poetry with emphasis on critical reading, analysis, and interpretation. Prerequisite: College Composition.

CAN ENGL 22 Introduction to Drama

A study of drama with emphasis on critical reading, analysis, and interpretation. Prerequisite: College Composition.

Developed by the intersegmental English faculty committee, April 1990. Reviewed Spring 1995.

Course Descriptions
for Family and Consumer Science (formerly Home Economics) Courses in the California Articulation Number System

CAN FCS 2 Nutrition

Scientific concepts of nutrition relating to the functioning of nutrients in the basic life processes. Emphasis on individual needs, food sources of nutrients, current nutritional issues, and nutrition analysis. Core components: functions of nutrients related to food groups, dietary guidelines and current recommendations, major nutrient classifications, digestion, absorption, cell metabolism and energy, energy balance, basal metabolism, physical activity, nutrition and wellness, dietary planning for weight management and eating disorders, critical evaluation of various "fad" diets, special dietary considerations, pregnancy and lactation, changing dietary needs over the life span, scientific method to analyze and evaluate nutrition information, nutrition information computer analysis and evaluation, diet and heredity, food safety and nutrient preservation, nutrition misinformation.

CAN FCS 4 Principles of Design

Color and design theories including basic visual elements, principles of design, their properties and relationships, and development of sensitivity to and judgment of design. Core components: basic design theory, design elements, design principles, color theory and application, color coordination, use of tools and materials, ideas for visual communications.

CAN FCS 6 Textiles

An introductory analysis of textile fibers, yarns, fabrications, dyestuffs, and finishes. Emphasis on selection, use, performance, suitability, and care of textile products for various end uses. Government legislation, labeling, and simple testing and evaluation of performance. Core components: historical background, fiber classification, theory, and identification; textile legislation, labeling, and consumer protection; yarn structure and construction; fabric construction; fabric finishes; color, dyestuffs, printing, and other applied design; fabric characteristics, performance, and suitability; fabric selection, use and care; fabric testing and evaluation.

CAN FCS 8 Principles of Foods

Basic knowledge of food science principles and food preparation techniques. Emphasis on ingredient interaction, technique and production standards, food safety, sanitation, nutrient values, and food presentations. Core components: food science principles; food preparation terminology and techniques; ingredient interaction, standards of product evaluation and quality control; selection and use of food equipment and utensils; food storage and preservation; sanitation and safety; nutrient retention techniques; labeling and consumer information.

CAN FCS 10 Principles of Clothing Construction

Basic technique for developing skills in apparel construction. Core components: sewing tools and equipment, body measurements; pattern selection; pattern adjustments; fabric selection and preparation; understanding and using commercial patterns; basic fabric manipulation; basic construction techniques; standards of quality construction; fit of a garment; construction of a complete garment.

CAN FCS 12 Family Relationships

The family and its interpersonal relationships, mate selection, adjustments within the family, family life cycle, parenthood, marriage enrichment, and contemporary family issues. Core components: research and theories related to marriage and the family; sociological and psychological concepts and terminology; historical development of family; marriage and family in meeting human needs; roles and expectations in couple relationships; concepts of love and infatuation, dating, courtship, engagement; gender role expectations;

intersegmental Home Economics Liaison Committee, Spring 1992. Reviewed January 1994, Spring 1999 and Spring 2002.

establishing and maintaining intimacy; cohabitation; selection of marriage partner; sexuality in couple relationships; reproduction; birth control and family planning; birthing and parenting; alternative family structures; communication skills; marriage enrichment and rebuilding relationships; current family issues; dysfunctional families; family violence; stress and conflict management; terminating relationships.

CAN FCS 14 Child Development

Growth and development of children from prenatal period through adolescence including individual needs of children. Core components: method of studying children; principles and theories of development; genetics vs environment; cognitive, physical, social, and emotional development; prenatal development; birth process and neonatal period; the infant/toddler; the preschool child; the school age child; the adolescent; play and toys; observing children; parent and family influences on the child; the exceptional child; child abuse and neglect.

CAN FCS 16 Life Management

Current changes in society which influence life management skills, including changing family structure; value conflicts; dual role issues; decision-making; and resource management. Core components: values and goals; decision-making/problem-solving; cultural forces; human growth potential; standards and priorities; impact of change; multiple roles; education and career decisions; motivation; delegation; communication; time and energy management; work simplification; environmental management; future trends; research skills.

CAN FCS 18 Interior Design Fundamentals

Essentials of interior design and furnishing, including consumer and socioeconomic considerations. Core components: design elements and principles; color theory and coordination; drafting plans and elevations; structural and decorative materials; space planning; periods of furniture and interiors; furniture selection and arrangement; human factors and behavioral needs.

CAN FCS 20 Fashion Selection

A study and application of the elements and principles of design as related to apparel for the individual. Core components: application of principles and elements of design theory; significance of apparel: psychological, sociological, physiological, and cultural; apparel and personality; apparel and lifestyle; wardrobe planning and budgeting; apparel for special needs; care of apparel.

CAN FCS 22 Fashion Industry and Marketing

Exploration of the fashion industry, marketing, and careers within the industry. Core components: development of fashion; fashion terminology; primary markets, producers of materials; secondary markets, design and production; retailing; auxiliary fashion resources; economic importance of the industry; channels of distribution; marketing concepts; domestic and foreign markets; fashion careers and job market analysis; sourcing; global implications.

CAN FCS 24 Child, Family & Society

Study of environmental influences on children and families. Core components: Socialization over the lifespan; Status of children in society; Family structures, contemporary, past and future; Family interpersonal relationships; Schools and other educational opportunities; Mass media influences; Influences of age, gender, racial, cultural, ethnic and socio-economic; Diverse family structures and parenting styles; Social challenges related to children and families; Available resources; Individuals with special needs; Impact of violence and abuse; and Impact of public policy.

CAN FCS 26 Food Science Technologies

Exploration of chemistry of foods, food processing and technology and how it affects the color, flavor, texture, aroma and quality of foods. Core components remain the same.

Developed by the intersegmental Home Economics Liaison Committee, April 1987; reviewed and revised by the

intersegmental Home Economics Liaison Committee, Spring 1992. Reviewed January 1994, Spring 1999 and Spring 2002.

CAN: FCS 28 Cultural and Ethnic Foods

Regional, ethnic, cultural, religious, historical and social influences on food patterns and cuisines. Core components: Specialized equipment and utensils related to cultures; regional, ethnic, cultural, religious, historical and social influences; traditional foods of selected cultures; geographic factors in food availability; global food issues; sanitation and safety practices; application to the food industry.

CAN: FCS 30 Sanitation and Safety

Basic principles of personal and institutional sanitation and application of these principles to food preparation, storage, service; prevention of food contamination. Regulations of the California Health and Safety Code. Emphasis on the supervisor's responsibilities in maintaining high standards of these principles. Training to meet certification requirements for food handlers. Core components: Importance of sanitation; microorganisms; contamination; food borne illness and food allergies; food storage and handling; personal sanitation; HACCP principles; sanitary facilities and equipment; sanitation regulations; accident prevention; crisis management; and pest management.

CAN: FCS 32 Introduction to the Professions

Orientation to careers in Dietetics, Nutrition Science, Food Science and Food Service Management. Introduction to professional associations, publications and legislation pertinent to the professions discussed. Core components: Professional Associations, professional ethics, publications, legislation, employability, career goals, career preparation, evolving career opportunities. (Speakers in professional areas and from local university programs as well as field trips may be included)

Developed by the intersegmental Home Economics Liaison Committee, April 1987; reviewed and revised by the

intersegmental Home Economics Liaison Committee, Spring 1992. Reviewed January 1994, Spring 1999 and Spring 2002.

Course Descriptions for French Courses in the California Articulation Number System

CAN FREN 2 Elementary French, 1st semester

The main focus is on listening and speaking, with reading and writing as supporting skills. Content areas include: formulaic expressions relating to daily life, environment, and routine activities, such as simple greetings, leave-takings, and courtesy expressions, family members, numbers, time, dates, weather, colors, and basic objects in the immediate environment. Language user functions primarily with learned words, phrases and formulaic expressions to list, enumerate, identify, and express minimal courtesies and agreement and disagreement. Accuracy emphasis is on vocabulary, pronunciation and spelling, with success measured by interaction with a very sympathetic listener/reader. The student can demonstrate the ability to comprehend and produce simple formulaic texts such as schedules, addresses, phone numbers, ads, weather reports, short information articles, notes written for native readers, signs, and postcards. Production shows occasional but not sustained creation with language to express personal meaning. The language user may also occasionally infer meaning from context and begin to understand the gist of unfamiliar material. Prerequisite: None. Competency Goal: Statement on Competencies Stage 1.2-1.3 Listening, Speaking, Reading, and Writing. ACTFL: Novice Mid to Novice High.

CAN FREN 4 Elementary French, 2nd semester

Course emphasis is on receptive competencies, listening and reading, and productive competencies, speaking and writing, at an approximately equal level. Course goals include the further development of language competency begun in the first stage including content areas: settings involving shopping, restaurants, lodging, asking directions and getting information about travel, transportation, etc., to express personal meaning and interact successfully in informal situations of daily life. Language functions include the ability to understand simple statements and questions and to participate in informal conversation by asking and answering questions. Students can supply personal information and simple descriptions both orally and in writing, and fulfill routine needs. Accuracy consists mainly of sentences and strings of sentences, with ideas juxtaposed. Writing may reflect oral language. Both speech and writing still require a sympathetic listener/reader. A student can get into, through, and out of a routine social or uncomplicated survival situation. Listeners will understand main ideas and some details in straightforward authentic auditory and written texts produced for native speakers. Students can expect to produce short messages, notes, letters, and descriptions of self, family, personal, and routine school and work experiences. Prerequisite: CAN FREN 2 or CAN FREN 1+3 or Statement on Competencies Stage 1.2 Reading, Writing, Listening, and Speaking. Competency Goal: Statement on Competencies Stage 2.1-2.2 Listening, Reading, Speaking, and Writing. ACTFL: Intermediate Low to Intermediate Mid.

Quarter courses may be identified as CAN FREN 1, 3, 5

CAN FREN SEQ A: Sum of the content of CAN FREN 1+3+5 or CAN FREN 2+4 - 10 semester units/year required.

Course descriptions developed by French faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993.

CAN FREN 8 Intermediate French, 1st semester

Reading and writing are increasingly stressed, while listening and speaking continue to develop. Courses at this level generally include formal study about the language structure, although not as the central focus of course content. Course goals include further development of vocabulary and functional competence. Content is expanded beyond "survival" needs in the immediate environment and deals in greater detail with areas such as money matters, professions/occupations, health, social and recreational activities, general feelings. There is an increased awareness of cultural norms, values, and culturally relevant and appropriate customs and events. Developing functions include asking/giving directions, using culturally appropriate greetings, introductions, accepting and refusing invitations, with an expanded repertoire of courtesy formulas, as well as the ability to talk about self, personal preferences, and activities in some detail, provide descriptions, and participate more in simple conversations. Accuracy is quite high in basic structures and vocabulary use, while attempts to use multiple time references and more complex discourse are still halting and require a somewhat sympathetic listener or reader. Productive and receptive skills are assessed with texts such as letters, short messages, notes, and descriptions of school/work experiences. Prerequisite: CAN FREN 4 or CAN FREN 3+5 or Statement on Competencies Stage 2.1 Reading, Writing, Listening, and Speaking. Competency Goals: Statement on Competencies Stage 2.2-2.3 Reading, Writing, Listening, and Speaking. ACTFL: Intermediate Mid to Intermediate High.

CAN FREN 10 Intermediate French, 2nd semester

Course emphasis is on culturally authentic reading and writing, along with continued development of listening/speaking competencies. Courses generally continue formal study of language structure and may introduce basic literary concepts. Focus on development of cohesive written narratives and expository prose, as preparation for higher level specialized work. Content areas include: current events, media, politics, values, history and traditions, social issues, customs, etc., with increased awareness of target cultural concerns, norms and values, and culturally specific customs and events. Functions include asking/giving directions, using culturally appropriate greetings, introductions, and a larger repertoire of courtesy formulas, as well as the ability to talk about personal preferences and activities in growing detail, provide descriptions and participate actively in conversations. Competency reflects the emerging ability to deal with complicated situations, and to attempt to discuss topics beyond immediate and personal needs such as current events, politics, business, cultural and moral issues, history and customs, and the use of forms indicating both past and future time. Accuracy focuses on narration and description in past and future time, as well as increasing control of content and sustained control of appropriate language. Student can comprehend and produce spoken and written messages, short reports, narrative texts such as letters, diaries, and summaries. Prerequisite: CAN FREN 8 or CAN FREN 7+9 or Statement on Competencies Stage 2.2 Reading, Writing, Listening, and Speaking. Competency Goals: Statement on Competencies Stage 2.3 Reading, Writing, Listening, and Speaking. ACTFL: Intermediate High.

Quarter courses may be identified as CAN FREN 7, 9, 11

CAN FREN SEQ B: Sum of the content of CAN FREN 7+9+11 or CAN FREN 8+10 - 10 semester units/year required.

Course Descriptions for Geography Courses in the California Articulation Number System

CAN GEOG 2 Introduction to Physical Geography, without Lab

This course is a spatial study of planet Earth's dynamic physical systems and processes. Topics include weather, climate, geomorphology, soils, and the biosphere. The emphasis is on interrelationships among systems and processes and their resulting patterns and distributions. Tools of geographic inquiry include maps, remote sensing, graphic data, and models.

CAN GEOG 4 Introduction to Human Geography

This course is a study of diverse human populations, their cultural origins, diffusion, and contemporary spatial expressions. Topics include demography, languages and religions, urbanization and landscape modification, political units and nationalism, and economic systems. Consideration is given to interrelationships between human activities and the physical environment.

CAN GEOG 6 Introduction to Physical Geography, with Lab

This course is a spatial study of planet Earth's dynamic physical systems and processes. Topics include weather, climate, geomorphology, soils, and the biosphere. The emphasis is on interrelationships among systems and processes and their resulting patterns and distributions. Tools of geographic inquiry include maps, remote sensing, graphic data, and models. The laboratory component includes practical exercises, experiments, observations, and data analyses designed to teach the scientific method.

Course descriptions developed by an intersegmental Geography faculty committee, March 1993.

Course Descriptions for Geology Courses in the California Articulation Number System

CAN GEOL 2 Physical Geology with Lab

Physical geology includes the study of plate tectonics, rocks and minerals, weathering, mass-wasting, surface and ground water, wind, waves and currents, glaciation, mountain building, volcanoes and other igneous activity, deformation and resulting structures, earthquakes, Earth's interior, geologic time, and earth resources. The laboratory component should include rock and mineral identification, interpretation of topographic and geologic maps and may include other geologic topics.

CAN GEOL 4 Historical Geology with Lab

Historical geology includes the study of the origin and evolution of Earth and its biosphere, incorporating plate tectonics, stratigraphy, paleontology, geologic dating, etc. The laboratory component should include the study of fossils and rocks, geologic maps, and the interpretation of ancient environments.

CAN GEOL 6 Physical Geology – Lecture only

Physical geology includes the study of plate tectonics, rocks and minerals, weathering, mass-wasting, surface and ground water, wind, waves and currents, glaciation, mountain building, volcanoes and other igneous activity, deformation and resulting structures, earthquakes, Earth's interior, geologic time, and earth resources.

CAN GEOL 8 Historical Geology – Lecture only

Historical geology includes the study of the origin and evolution of Earth and its biosphere, incorporating plate tectonics, stratigraphy, paleontology, geologic dating, etc.

Course descriptions developed by an intersegmental Geology faculty committee, March 1993. Reviewed Spring 1998.

Course Descriptions for German Courses in the California Articulation Number System

CAN GERM 2 Elementary German, 1st semester

Course emphasis: first listening and speaking, then writing/reading. Depending on the needs of the program and the class, greater emphasis will be placed on some competencies more than others. The primary objective is to provide a first stage of language competency which includes the following content areas: greetings, introductions, courtesy expressions, daily activities, days of the week, months of the year, numbers, seasons, weather, family members, colors, clothing, as well as basic objects in the classroom, at home, and in the immediate environment. Language functions developed enable students to carry on a basic conversation, to describe the immediate environment using learned phrases and expressions, to answer and ask questions and begin to create with language. Students are able to respond to frequently occurring situations in culturally appropriate ways. Students develop accuracy with German by responding initially in words and phrases, and then in sentences. The first stage of accuracy emphasizes vocabulary plus pronunciation and spelling. The second stage of accuracy includes vocabulary, pronunciation and spelling, plus grammar. Success reflects the ability to complete a "real world" task. Students can comprehend or produce texts such as ads, announcements, instructions, and a basic phone conversation or peer interview, as well as postcards and notes. Prerequisite: None. Competency Goal: Statement on Competencies Stage 1.3-2.1 Reading, Writing, Listening, Speaking. ACTFL: Novice High to Intermediate Low.

CAN GERM 4 Elementary German, 2nd semester

Course emphasis is on listening, speaking, writing, and reading. This is the second half of a one-year course. The first stage of language competency is expanded to include the following content areas: greetings, introductions, courtesy expressions, daily activities, days of the week, months of the year, numbers, seasons, weather, family members, colors, clothing, as well as basic objects in the classroom, at home, and in the immediate environment. The language functions develop competencies to carry on a basic conversation, to describe the immediate environment using learned phrases and expressions, and to answer and ask questions and to begin to create with language. Students respond to frequently occurring situations in culturally appropriate ways. The first stage of accuracy emphasized vocabulary plus pronunciation and spelling. The second stage of accuracy includes vocabulary, pronunciation and spelling, plus grammar. Competency reflects the ability to complete a "real world" task in a number of different situations consistently. The student can comprehend or produce texts such as ads, announcements, instructions, and a simple phone conversation or peer interview, as well as postcards and notes, horoscopes, personal biographical information, peer interview write-ups, journal entries, and descriptions of daily routine or school/work experiences. Prerequisite: CAN GERM 2 or CAN GERM 1+3 or Statement on Competencies Stage 1.3-2.1 Reading, Writing, Listening, and Speaking. Competency Goal: Statement on Competencies Stage 1.3 Reading, 2.1 Writing, Listening, and Speaking. ACTFL: Novice High to Intermediate Mid.

Quarter courses may be identified as CAN GERM 1, 3, 5

CAN GERM SEQ A: Sum of the content of CAN GERM 1+3+5 or CAN GERM 2+4 - 10 semester units/year required.

Course descriptions developed by German faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993. Reviewed Spring 1998.

CAN GERM 8 Intermediate German, 1st semester

Course emphasis is on listening, speaking, and reading. Course goals include further development of vocabulary and functional competence to express personal meaning and to apply different strategies and techniques to a variety of texts. Content areas range from the immediate environment and every day survival situations to topics including current events, travel, leisure, history, politics, ecological issues, and some business and economics. Functions developed include comprehending main ideas and supporting details. Language functions enable students to ask and answer questions, request favors, and give simple commands. Accuracy is developed by responding with appropriate language to survive in a German-speaking environment and expanding the range of vocabulary. Students can comprehend and read with increasing fluency a variety of texts, and can produce texts such as announcements, instructions, personal biographical information, or descriptions of experiences. Prerequisite: CAN GERM 4 or CAN GERM 3+5 or Statement on Competencies Stage 1.3 Reading, 2.1 Writing, Listening, and Speaking. Competency Goals: Statement on Competencies Stage 2.2 Reading, Listening, and Speaking. ACTFL: Intermediate Mid.

CAN GERM 10 Intermediate German, 2nd semester

Course emphasis is on writing, speaking, and listening. Students expand competence to adapt successfully to new situations moving from concrete toward more generalized and factual information. Content areas in writing and speaking expand the immediate environment to provide a wider range of topics including current events, travel, leisure, history, politics and ecological issues, as well as some areas of business and economics. Students begin to expand competence in providing descriptions and narration that relate not only to the present and future, but also to the past. Students learn how to state their opinions and to give reasons for their opinions so that moving to the next stage they are able to support their opinions in written and spoken discussions. Language functions developed enable students to understand a wide variety of spoken and written texts dealing not only with their own immediate interests, but with a broader spectrum of both German and American culture. Development of accuracy emphasizes writing. Students develop a range of writing skills that relate to personal and family situations, as well as to academic and work experiences, and they become familiar with a variety of texts. Students can comprehend and produce texts such as ads, announcements, instructions, and simple phone conversations or peer interviews, as well as postcards, notes, horoscopes, personal biographical information, peer interview write-ups, journal entries, and descriptions of daily routine or school/work experiences. Prerequisite: CAN GERM 8 or CAN GERM 7+9 or Statement on Competencies Stage 2.2 Listening, Speaking, and Reading. Competency Goals: Statement on Competencies Stage 2.3 Writing, Speaking, and Listening. ACTFL: Intermediate High.

Quarter courses may be identified as CAN GERM 7, 9, 11

CAN GERM SEQ B: Sum of the content of CAN GERM 7+9+11 or CAN GERM 8+10 - 6-10 semester units/year required.

Course descriptions developed by German faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993. Reviewed Spring 1998.

Course Descriptions
for Government Course(s) in the
California Articulation Number System

CAN GOVT 2 Introduction to American Government

A basic course which examines the U.S. Constitution and the U.S. system of government at the national and state levels; the course covers both U.S. and the California political processes and institutions. (Meets California state law requirement for "U.S. Constitution and California state and local government.")

Course descriptions developed by an inersegmental Government /Political Science faculty committee Spring 1988.

Course Descriptions for History Courses in the California Articulation Number System

CAN HIST 1 History of Western Civilization, 1st quarter

Western civilization from ancient to medieval times. Analyzes the changes and continuities in cultural, economic, geographic, political, and social forces.

CAN HIST 2 History of Western Civilization, 1st semester

Western civilization from ancient times to the early modern era. Analyzes the changes and continuities in cultural, economic, geographic, political, and social forces.

CAN HIST 3 History of Western Civilization, 2nd quarter

Western civilization from medieval times to the dawn of the modern era. Analyzes the changes and continuities in cultural, economic, geographic, political, and social forces.

CAN HIST 4 History of Western Civilization, 2nd semester

Western civilization from the early modern era to the present. Analyzes the changes and continuities in cultural, economic, geographic, political, and social forces.

CAN HIST 5 History of Western Civilization, 3rd quarter

Western civilization in the modern era. Analyzes the changes and continuities in cultural, economic, geographic, political, and social forces.

CAN HIST SEQ A: Sum of the content of CAN HIST 1+3+5 or CAN HIST 2+4

CAN HIST 8 United States History

American peoples and institutions from earliest times to Reconstruction.

CAN HIST 10 United States History

American peoples and institutions since Reconstruction.

CAN HIST SEQ B: Sum of the content of CAN HIST 8+10

Course descriptions developed by an intersegmental History faculty committee, March 1993. Reviewed Spring 1998.

CAN HIST 13 History of World Civilizations, 1st quarter

The origins and early development of world civilizations. A comparative analysis of cultural, economic, geographic, political, religious, and social forces of world civilizations.

CAN HIST 14 History of World Civilizations, 1st semester

The origins and development of world civilizations to the early modern era. A comparative analysis of cultural, economic, geographic, political, religious, and social forces of world civilizations.

CAN HIST 15 History of World Civilizations, 2nd quarter

The continued development of world civilizations to the dawn of the modern era. A comparative analysis of cultural, economic, geographic, political, religious, and social forces of world civilizations.

CAN HIST 16 History of World Civilizations, 2nd semester

World civilizations from the early modern era to the present. A comparative analysis of cultural, economic, geographic, political, religious, and social forces of world civilizations.

CAN HIST 17 History of World Civilizations, 3rd quarter

World civilizations in the modern era. A comparative analysis of cultural, economic, geographic, political, religious, and social forces of world civilizations.

CAN HIST SEQ C: Sum of the content of CAN HIST 13+15+17 or CAN HIST 14+16

Course descriptions developed by an intersegmental History faculty committee, March 1993. Reviewed Spring 1988.

Course Descriptions
for Italian Courses in the
California Articulation Number System

CAN ITAL 2 Elementary Italian, 1st semester

The main focus is on listening and speaking, with reading and writing as supporting skills. Content areas include: formulaic expressions relating to daily life, environment, and routine activities, such as simple greetings, leave-takings, and courtesy expressions, family members, numbers, time, dates, weather, colors, and basic objects in the immediate environment. Language user functions primarily with learned words, phrases and formulaic expressions to list, enumerate, identify, and express minimal courtesies and agreement and disagreement. Accuracy emphasis is on vocabulary, pronunciation and spelling, with success measured by interaction with a very sympathetic listener/reader. The student can demonstrate the ability to comprehend and produce simple formulaic texts such as schedules, addresses, phone numbers, ads, weather reports, short information articles, notes written for native readers, signs, and postcards. Production shows occasional but not sustained creation with language to express personal meaning. The language user may also occasionally infer meaning from context and begin to understand the gist of unfamiliar material. Prerequisite: None. Competency Goal: Statement on Competencies Stage 1.2-1.3 Listening, Speaking, Reading, and Writing. ACTFL: Novice Mid to Novice High.

CAN ITAL 4 Elementary Italian, 2nd semester

Course emphasis is on receptive competencies, listening and reading, and productive competencies, speaking and writing, at an approximately equal level. Course goals include the further development of language competency begun in the first stage including content areas: settings involving shopping, restaurants, lodging, asking directions and getting information about travel, transportation, etc., to express personal meaning and interact successfully in informal situations of daily life. Language functions include the ability to understand simple statements and questions and to participate in informal conversation by asking and answering questions. Students can supply personal information and simple descriptions both orally and in writing, and fulfill routine needs. Accuracy consists mainly of sentences and strings of sentences, with ideas juxtaposed. Writing may reflect oral language. Both speech and writing still require a sympathetic listener/reader. A student can get into, through, and out of a routine social or uncomplicated survival situation. Listeners will understand main ideas and some details in straightforward authentic auditory and written texts produced for native speakers. Students can expect to produce short messages, notes, letters, and descriptions of self, family, personal, and routine school and work experiences. Prerequisite: CAN ITAL 2 or CAN ITAL 1+3 or Statement on Competencies Stage 1.2 Reading, Writing, Listening, and Speaking. Competency Goal: Statement on Competencies Stage 2.1-2.2 Listening, Reading, Speaking, and Writing. ACTFL: Intermediate Low to Intermediate Mid.

Quarter courses may be identified as CAN ITAL 1, 3, 5

CAN ITAL SEQ A: Sum of the content of CAN ITAL 1+3+5 or CAN ITAL 2+4 - 10 semester units/year required.

Course descriptions developed by Italian faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993. Reviewed Spring 1998.

CAN ITAL 8 *Intermediate Italian, 1st semester*

Reading and writing are increasingly stressed, while listening and speaking continue to develop. Courses at this level generally include formal study about the language structure, although not as the central focus of course content. Course goals include further development of vocabulary and functional competence. Content is expanded beyond "survival" needs in the immediate environment and deals in greater detail with areas such as money matters, professions/occupations, health, social and recreational activities, general feelings. There is an increased awareness of cultural norms, values, and culturally relevant and appropriate customs and events. Developing functions include asking/giving directions, using culturally appropriate greetings, introductions, accepting and refusing invitations, with an expanded repertoire of courtesy formulas, as well as the ability to talk about self, personal preferences, and activities in some detail, provide descriptions, and participate more in simple conversations. Accuracy is quite high in basic structures and vocabulary use, while attempts to use multiple time references and more complex discourse are still halting and require a somewhat sympathetic listener or reader. Productive and receptive skills are assessed with texts such as letters, short messages, notes, and descriptions of school/work experiences. Prerequisite: CAN ITAL 4 or Statement on Competencies Stage 2.1 Reading, Writing, Listening, and Speaking. Competency Goals: Statement on Competencies Stage 2.2-2.3 Reading, Writing, Listening, and Speaking. ACTFL: Intermediate Mid to Intermediate High.

CAN ITAL 10 Intermediate Italian, 2nd semester

Course emphasis is on culturally authentic reading and writing, along with continued development of listening/speaking competencies. Courses generally continue formal study of language structure and may introduce basic literary concepts. Focus on development of cohesive written narratives and expository prose, as preparation for higher level specialized work. Content areas include: current events, media, politics, values, history and traditions, social issues, customs, etc., with increased awareness of target cultural concerns, norms and values, and culturally specific customs and events. Functions include asking/giving directions, using culturally appropriate greetings, introductions, and a larger repertoire of courtesy formulas, as well as the ability to talk about personal preferences and activities in growing detail, provide descriptions and participate actively in conversations. Competency reflects the emerging ability to deal with complicated situations, and to attempt to discuss topics beyond immediate and personal needs such as current events, politics, business, cultural and moral issues, history and customs, and the use of forms indicating both past and future time. Accuracy focuses on narration and description in past and future time, as well as increasing control of content and sustained control of appropriate language. Student can comprehend and produce spoken and written messages, short reports, narrative texts such as letters, diaries, and summaries. Prerequisite: CAN ITAL 8 or Statement on Competencies Stage 2.2 Reading, Writing, Listening, and Speaking. Competency Goals: Statement on Competencies Stage 2.3 Reading, Writing, Listening, and Speaking. ACTFL: Intermediate High.

CAN ITAL SEQ B: Sum of the content of CAN ITAL 8+10 - 10 semester units/year required.

Course descriptions developed by Italian faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993.

Course Descriptions for Japanese Courses in the California Articulation Number System

CAN JAPN 2 Elementary Japanese, 1st semester

Course emphasis is on listening, speaking, reading and writing. Course goals include development of the first stage of language competency which includes the following content areas: basic vocabulary and formulaic expressions such as greetings, introductions, family members, familiar objects and daily activities, likes and dislikes, numbers, counting and time. Language functions developed enable students to communicate with learned words, phrases and expressions, to develop basic functional skills, to greet, introduce, ask and answer questions, make suggestions, and tell about objects, events and situations in simple oral or written discourse. Students develop the ability to perform communicative tasks using learned expressions and to create with the language and to respond in culturally appropriate manners. First stage of accuracy emphasizes vocabulary, pronunciation, and orthography, with success measured by communication through interaction with a very sympathetic listener/reader. Students can engage in very simple every day conversations or in a phone conversation, are able to comprehend some signs or menus, and are able to produce very simple texts for messages, notes, and such correspondence as postcards or short letters on familiar topics. Prerequisite: None. Competency Goal: Statement on Competencies Stage 1.2 Reading; 2.1 Listening, Speaking, and Writing. ACTFL: Novice Mid to Intermediate Low.

CAN JAPN 4 Elementary Japanese, 2nd semester

Course emphasis is on listening, speaking, reading and writing. Course goals include development of broader vocabulary and functional competence that was begun in the first stage of language competency including content areas such as classes, locations, shopping, food, colors, calendars, leisure activities, travelling, and climate. Language functions include basic skills to describe, identify, compare, locate, as well as to express wishes, requests, intentions, and expectations. Second stage of accuracy consists mainly of sentences and strings of sentences. Writing may reflect oral language. Both speech and writing still require a sympathetic listener/reader. Students can give and ask for personal biographical information, find their way around, describe possessions, do shopping, and order food. They are able to comprehend some signs and correspondence such as postcards or short personal letters. Prerequisite: CAN JAPN 2 or Statement on Competencies Stage 1.2 Reading and 2.1 Listening, Speaking, and Writing. Competency Goal: Statement on Competencies Stage 1.3 Reading; 2.1 Speaking and Writing; 2.2 Listening. ACTFL: Novice Mid to Intermediate Low.

CAN JAPN SEQ A: Sum of the content of CAN JAPN 2+4 - 10 semester units/year required.

Course descriptions developed by Japanese faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993. Reviewed Spring 1998.

CAN JAPN 8 Intermediate Japanese, 1st semester

Course emphasis is on listening, speaking, reading and writing. Course goals include further development of vocabulary and functional competence. Content is expanded beyond "survival" needs in the immediate environment and deals in greater detail with the following areas: stores and offices, travelling, clothing, housing, education, kinship, professional rank, vehicles, social and recreational activities, as well as increased awareness of cultural norms, values, and culturally relevant and appropriate customs and events. Developing functions include the ability to engage in casual conversation, express opinions and make suggestions on familiar topics, as well as some abstract issues and plans. Competency reflects the emerging ability to develop understanding of appropriate Japanese language use in formal and informal situations. Accuracy becomes quite high in high frequency structures and vocabulary but more complex discourse is still quite halting and requires a somewhat sympathetic listener or reader. Students comprehend and produce spoken and written messages, announcements, invitations, and simple narrative texts such as letters and diaries. Prerequisite: CAN JAPN 4 or Statement on Competencies Stage 1.3 Reading; 2.1 Speaking and Writing; 2.2 Listening. Competency Goals: Statement on Competencies Stage 2.1 Reading; 2.2 Listening, Speaking, and Writing. ACTFL: Intermediate Low to Intermediate Mid.

CAN JAPN 10 Intermediate Japanese, 2nd semester

Course emphasis is on listening, speaking, reading and writing. Course goals include further development of vocabulary and functional competence. Content is expanded in the areas outlined previously and now includes festivals, business, industry, religion, history, leisure activities, diet, medicine, and meteorology. Developing functions include the ability to engage in formal or informal conversation, express opinions, give reasons, and hypothesize. Developing accuracy focuses on an increasing control of content and sustained control of culturally appropriate language which requires increasingly less of a sympathetic listener/reader. Students can comprehend and produce spoken or written messages, announcements, invitations, instructions, and narrative texts such as letters, diaries, and stories. They are able to understand some news items and ads. Prerequisite: CAN JAPN 8 or Statement on Competencies Stage 2.1 Reading; 2.2 Listening, Speaking, and Writing. Competency Goals: Statement on Competencies Stage 2.3 Listening; 2.2 Speaking, Reading, and Writing. ACTFL: Intermediate Mid to Intermediate High.

CAN JAPN SEQ B: Sum of the content of CAN JAPN 8+10 - 10 semester units/year required.

Course descriptions developed by Japanese faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993.

Course Descriptions for Journalism Courses in the California Articulation Number System

CAN JOUR 2 Introduction to Newswriting and Reporting

An introduction to evaluating, gathering, and writing news in accepted journalistic style under newsroom conditions. Includes role of the reporter and the legal and ethical issues related to reporting. The student should have writing and reporting experiences, including personal interviews, speech, meeting and other event coverage, deadline writing and use of AP style.

CAN JOUR 4 Introduction to Mass Communication

Survey of mass communication and the interrelationships of media with society including history, structure and trends. Discussion of theories and effects, economics, technology, law and ethics, and social issues, including gender and cultural diversity.

1998.

Course Descriptions
for Kinesiology/Physical Education Courses in the
California Articulation Number System

CAN KINE/PE 2 Introduction to Physical Education

Introduction and orientation to kinesiology/physical education as a discipline and procession. Exploration of sub-disciplines and career opportunities in physical education. Critical analysis and evaluation of literature, philosophy and scientific basis.

CAN KINE/PE 4 Introduction to Athletic Training

Introductory course in recognition, assessment, management, care and prevention of injuries occurring in physical activities.

CAN KINE/PE 6 Sports Officiating

Study and interpretation of rules for various sports; procedures, mechanics and practices in officiating. Personal and philosophical bases for officiating

CAN KINE/PE 8 First Aid and CPR

The emergency care and treatment of illnesses and injuries including training in cardiopulmonary resuscitation. May lead to advance national certification.

CAN KINE/PE 10 Water Safety Instruction

Comprehensive analysis of principles of movement, aquatic management, organizational strategies utilized in presenting aquatic activities, and advanced swimming skills. Includes an opportunity to qualify for advanced national certification.

CAN KINE/PE 12 Life Guard Training

Provide life guard candidates with the skills, knowledge, duties and responsibilities to keep the patrons of aquatic facilities safe in and around the water. Designed to prevent accidents and rescue others.

Developed by an intersegmental Physical Education Faculty Committee, Spring 1999

Course Descriptions for Mathematics/Statistics Courses in the California Articulation Number System

CAN MATH 2 Introduction to Mathematical Reasoning

An elementary introduction to mathematics, emphasizing the deductive process; concepts of contemporary mathematics; primarily for liberal arts students. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 semester units or 4 quarter units.

CAN MATH 4 Mathematics for Elementary School Teaching

Development and structure of the real number system and its subsystems; elementary concepts of set theory, relations, and operations; inductive reasoning including patterns and sequences; deductive reasoning; logic. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 semester units or 4 quarter units.

CAN MATH 8 Trigonometry

The trigonometric functions, their graphs and identities; laws of sines and cosines; solutions of triangles; trigonometric equations; inverse trigonometric functions; polar coordinates, DeMoivre's Theorem. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 semester units or 4 quarter units.

CAN MATH 10 College Algebra

Polynomial, rational, exponential, and logarithmic functions; matrices, and determinants; theory of equations; analytic geometry, mathematical induction. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 semester units or 4 quarter units.

CAN MATH 12 Finite Mathematics

Sets, matrices, and systems of equations and inequalities; linear programming; combinatorial techniques, and introduction to probability; mathematics of finance; primarily for business, social, and behavioral science majors. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 semester units or 4 quarter units.

CAN MATH 16 Pre-Calculus

Preparation for calculus; polynomial, rational, exponential, logarithmic, and trigonometric functions; analytic geometry; mathematical induction. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 4 semester units or 5 quarter units.

CAN MATH 17 Calculus, 1st quarter

Introduction to differential and integral calculus; functions, limits, and continuity; techniques and applications of differentiation. Primarily for mathematics, physical science, and engineering majors. Prerequisite: CAN MATH 16 or equivalent. 4 quarter units.

Developed by an intersegmental faculty committee in Mathematics, October 1988; reviewed November 1990, reviewed Spring 1995 and Spring 1999. Statistics developed October 1988. Reviewed Fall 1990, Fall 1992 and Spring 1995.

CAN MATH 18 Calculus, 1st semester

Introduction to differential and integral calculus; functions, limits, and continuity; techniques and applications of differentiation; the Fundamental Theorem of Calculus. Primarily for mathematics, physical science, and engineering majors. Prerequisite: CAN MATH 16 or equivalent. 4 semester units.

CAN MATH 19 Calculus, 2nd quarter

Continuation of differential and integral calculus with applications; techniques of integration. Primarily for mathematics, physical science, and engineering majors. Prerequisite: CAN MATH 17. 4 quarter units.

CAN MATH 20 Calculus, 2nd semester

Continuation of differential and integral calculus with applications; techniques of integration; infinite series and sequences. Primarily for mathematics, physical science, and engineering majors. Prerequisite: CAN MATH 18. 4 semester units.

CAN MATH 21 Calculus, 3rd quarter

Continuation of differential and integral calculus with applications; infinite sequences and series. Primarily for mathematics, physical science, and engineering majors. Prerequisite: CAN MATH 19. 4 quarter units.

CAN MATH SEQ B: Sum of the content of CAN MATH 17+19+21 or CAN MATH 18+20

CAN MATH 22 Calculus, 3rd semester

Vector-valued functions; calculus of functions of more than one variable, partial derivatives, multiple integration; Green's theorem, Stokes' theorem, and the divergence theorem. Prerequisite: CAN MATH 20. 4 semester units.

CAN MATH 23 Calculus, 4th quarter

Vector-valued functions; calculus of functions of more than one variable, partial derivatives, multiple integration; Green's theorem, Stokes' theorem, and the divergence theorem. Primarily for mathematics, physical science, and engineering majors. Prerequisite: CAN MATH 21. 4 quarter units.

CAN MATH SEQ C: Sum of the content of CAN MATH 17+19+21+23 or
CAN MATH 18+20+22

CAN MATH 24 Differential Equations

First and second order ordinary differential equations; linear differential equations; Laplace transforms. Prerequisite: CAN MATH 20/21. 3 semester units or 4 quarter units.

CAN MATH 26 Linear Algebra

Matrices and linear transformations; vector spaces; determinants; eigenvalues and eigenvectors. Prerequisite: CAN MATH 17/18. 3 semester units or 4 quarter units.

CAN MATH 29 Calculus for the Life and Social Sciences, 1st quarter

Concepts of function and limit; techniques of differentiation and integration with applications. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 quarter units.

Developed by an intersegmental faculty committee in Mathematics, October 1988; reviewed November 1990, reviewed Spring 1995 and Spring 1999. Statistics developed October 1988. Reviewed Fall 1990, Fall 1992 and Spring 1995.

CAN MATH 30 Calculus for the Life and Social Sciences, 1st semester

Concepts of function and limit; techniques of differentiation and integration with applications. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 semester units.

CAN MATH 31 Calculus for the Life and Social Sciences, 2nd quarter

Continuation of first quarter course; partial differentiation and extremum problems. Prerequisite: CAN MATH 29. 3 quarter units.

CAN MATH 32 Calculus for the Life and Social Sciences, 2nd semester

Continuation of first semester course; partial differentiation and extremum problems; multiple integrals. Prerequisite: CAN MATH 30. 3 semester units.

CAN MATH 33 Calculus for the Life and Social Sciences, 3rd quarter

Continuation of second quarter course; multiple integrals. Prerequisite: CAN MATH 31. 3 quarter units.

CAN MATH SEQ D: Sum of the content of CAN MATH 29+31+33 or CAN MATH 30+32

CAN MATH 34 Calculus for Business

Concepts of function and limit; applied calculus emphasizing techniques of differentiation and integration for business applications; partial derivatives. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 semester units or 4 quarter units.

CAN STAT 2 Introduction to Statistics

Introductory course in probability and statistics; descriptive analysis and presentation of data; hypothesis testing; statistical inference; normal and chi-square distributions; applications. Prerequisites: Algebra I, Geometry, and Intermediate Algebra (Algebra II). 3 semester units or 4 quarter units.

Developed by an intersegmental faculty committee in Mathematics, October 1988; reviewed November 1990, reviewed Spring 1995 and Spring 1999. Statistics developed October 1988. Reviewed Fall 1990, Fall 1992 and Spring 1995.

Course Descriptions for Music Courses in the California Articulation Number System

CAN MUS 2 Music Theory I

This course incorporates the following concepts: diatonic scales and triads; intervals; basic properties of sound; diatonic chord progressions and basic cadential formula; dominant seventh; figured bass; non-harmonic tones; and voice leading involving 4 part chorale writing. A concurrent laboratory experience in ear training and sightsinging includes melodic, harmonic, and rhythmic dictation.

CAN MUS 4 Music Theory II

This course incorporates the concepts from Music Theory I. In addition, through writing and analysis, the course will include secondary dominants, modulation, binary and ternary forms. Diminished seventh and non-dominant chords will be addressed. A concurrent laboratory experience in ear training and sightsinging includes melodic, harmonic, and rhythmic dictation.

CAN MUS SEQ A: Sum of the content of CAN MUS 2+4

CAN MUS 6 Music Theory III

This course incorporates the concepts from Music Theory II. In addition, through writing and analysis, the course will include Neopolitan and augmented six chords, chromatic harmony, altered chords and dominants, basic 18th century polyphony, variation techniques, borrowed chords and 9th, 11th and 13th chords. A concurrent laboratory experience in ear training and sightsinging includes melodic, harmonic, and rhythmic dictation.

CAN MUS SEQ C: Sum of the content of CAN MUS 2+4+6

CAN MUS 8 Music History and Literature I

A study of the history of western art music from antiquity through the Baroque including the contributions of other cultures with selected readings, recordings, and score analysis.

CAN MUS 10 Music History and Literature II

A study of the history of western art music from classical period through the present including the contributions of other cultures with selected readings, recordings, and score analysis.

CAN MUS SEQ B: Sum of the content of CAN MUS 8+10

CAN MUS 12 Music Theory IV

This course introduces 20th century techniques including tone rows, set theory, quartal harmony, and selected current styles and procedures. Analysis and composition in single movement classical forms. A concurrent laboratory experience in ear training and sightsinging includes melodic, harmonic, and rhythmic dictation.

CAN MUS 14 Applied Music I

Individualized study of departmentally approved classical performance curriculum, evaluated through a juried performance and including a departmental recital.

Course descriptions developed by an intersegmental Music faculty committee, April 1992. Reviewed Spring 1995.

CAN MUS 16 Applied Music II

Individualized study of departmentally approved classical performance curriculum, evaluated through a juried performance and including a departmental recital. Prerequisite: Applied Music I.

CAN MUS 18 Applied Music III

Individualized study of departmentally approved classical performance curriculum, evaluated through a juried performance and including a departmental recital. Prerequisite: Applied Music II.

CAN MUS 20 Applied Music IV

Individualized study of departmentally approved classical performance curriculum, evaluated through a juried performance and including a departmental recital. Prerequisite: Applied Music III.

CAN MUS 22 Class Piano I

Skills development in performing four-part harmony; harmonizing melodies, modulation, simple score reading and sight reading.

CAN MUS 24 Class Piano II

Further development in performing four-part harmony; harmonizing melodies, modulation, simple score reading and sight reading. Prerequisite: Class Piano I.

Course Descriptions for Philosophy Courses in the California Articulation Number System

CAN PHIL 2 Introduction to Philosophy

An introduction to philosophical issues and methods concerning knowledge, reality and values. Possible topics include the sources and limits of knowledge, the nature of reality and the self, and examination of fundamental beliefs about ethics, religion, science, language, art, society, politics and the meaning of life.

CAN PHIL 4 Introduction to Ethics

An examination of the basic concepts of morality and values, representative ethical theories and their application to moral problems. Topics will include right and wrong, good and bad, obligation, rights, justice, virtue, moral responsibility, and the good life.

CAN PHIL 6 Introduction to Logic

An introduction to the principles of sound reasoning with emphasis on deductive logic. The course must include a study of formal techniques of propositional logic. The course may also include a treatment of inductive reasoning, language, or fallacies.

CAN PHIL 8 History of Philosophy I

Survey of ancient philosophy with emphasis on the development of Greek philosophy from the Pre-Socratics through Aristotle; may also include Hellenistic, Roman, medieval or non-western thinkers.

CAN PHIL 10 History of Philosophy II

Survey of modern philosophy from the Renaissance through the 18th century, with emphasis on the development of philosophical thought from Descartes through Kant; may include 19th and 20th century philosophers.

History of Philosophy quarter courses may be identified as CAN PHIL 7, 9, 11.

CAN PHIL SEQ A: Sum of the content of CAN PHIL 7+9+11 or CAN PHIL 8+10

Course descriptions developed by an intersegmental Philosophy faculty committee, May 1991. Reviewed January 1994 and Spring 1995.

Course Descriptions for Physics Courses in the California Articulation Number System

CAN PHYS 2 Physics (Algebra/Trig based)

Designed primarily for life science and related majors. Mechanics, thermal physics, oscillations, and waves. Lecture/lab. Prerequisite: CAN MATH 16, CAN MATH 8+10, or equivalent.

CAN PHYS 4 Physics (Algebra/Trig based)

Designed primarily for life science and related majors. Electricity and magnetism; optics; introduction to modern physics. Lecture/lab. Prerequisite: CAN PHYS 2 or equivalent.

CAN PHYS SEQ A: Sum of the content of CAN PHYS 2+4

CAN PHYS 8 Physics (Calculus based)

Designed primarily for physics, engineering, and related majors. Mechanics. Lecture/lab. Prerequisite: CAN MATH 17 or CAN MATH 18 or equivalent. Corequisite: CAN MATH 19 or CAN MATH 20 or equivalent.

CAN PHYS 12 Physics (Calculus based)

Designed primarily for physics, engineering, and related majors. Electricity and magnetism. Lecture/lab. Prerequisites: CAN PHYS 8 or equivalent; CAN MATH 19 or CAN MATH 20 or equivalent.

CAN PHYS 14 Physics (Calculus based)

Designed primarily for physics, engineering, and related majors. Thermal physics; waves; optics; introduction to modern physics. Lecture/lab. Prerequisites: CAN PHYS 8 or equivalent; CAN PHYS 12 or equivalent is recommended.

CAN PHYS SEQ B: Sum of the content of CAN PHYS 8+12+14

CAN PHYS 16 Modern Physics for Science/Engineering Majors

Relativity theory, introduction to quantum theory, and basic applications of these theories to examples including the one-electron atom. Lecture. Prerequisites: CAN PHYS 12+14 or equivalents.

CAN PHYS SEQ C: Sum of the content of CAN PHYS 8+12+14+16

Course descriptions developed by an intersegmental Physics faculty committee, May 1991. Reviewed January 1994.

Course Descriptions for Psychology Courses in the California Articulation Number System

CAN PSY 2 Introduction to Psychology

Scientific study of behavior through an exploration of major concepts, methods, and research findings. Topics include biological, physiological, and cognitive processes; learning and motivation; life span development; individual differences; behavioral disorders and therapies; social behavior; and applied psychology.

CAN PSY 6 Introduction to Statistics in Psychology

The application of statistical methods to psychological data. Topics include descriptive statistics, linear correlation and regression, concepts of statistical significance and power, ttests, chi-square tests, and an introduction to analysis of variance. Prerequisite: competency in intermediate algebra.

CAN PSY 8 Research Methods in Psychology

Planning and executing research studies. Formulating hypotheses, reviewing the literature, collecting and analyzing data, and writing APA style reports. Lecture/lab. Pre or co-requisite: introductory Statistics.

CAN PSY 10 Introductory Physiological Psychology

A study of the biological basis of behavior. Topics include basic neuroanatomy and neurophysiology; research methods and findings; and physiological mechanisms underlying the psychological phenomena of sensation, perception, emotion, motivation, learning, memory, and psychological disorders.

Course descriptions developed by an intersegmental Psychology faculty committee, May 1991. Reviewed January 1994 and Spring 1997.

Course Descriptions for Recreation Courses in the California Articulation Number System

CAN REC 2 Introduction to Recreation

Theories and techniques of leadership of recreation activities emphasizing social development and integration of individuals into group program; planning and presentation of activities.

CAN REC 4 Introduction to Recreation Leadership

Theories and techniques of leadership of recreation activities emphasizing social development and integration of individuals into group program; planning and presentation of activities.

CAN REC 6 Recreational Use of Natural Resources

A study of the philosophies and policies of recreation resources managing agencies in federal, state, and local levels of government; outdoor recreation concepts.

CAN REC 8 Recreation - Environment and Park Soils Management

Introduction to the concept of soil as a natural body with varying physical, chemical, and biological properties; analysis and consideration of their implications for management of land.

Course descriptions developed by an intersegmental Recreation Leisure Studies faculty committee Fall 1988.

Course Descriptions for Russian Courses in the California Articulation Number System

CAN RUSS 2 Elementary Russian, 1st semester

Course emphasis is on listening and speaking, with reading and writing as supporting skills. Course goals include development of first stage language competency which includes the following content areas: greetings, introductions, courtesy expressions, days of the week, months of the year, numbers, seasons, weather, and family members, as well as basic objects in the immediate environment. Includes a gradual introduction to the Cyrillic alphabet and basic constructive features of Russian. Language functions developed enable students to recognize and interpret essential messages and respond, at first non-verbally, then in words, phrases, and simple sentences. Students are able to function in the language with learned words and phrases to make acquaintances, express greetings and gratitude, ask and answer limited personal questions, ask permission, and receive directions. Students develop accuracy by responding initially in words and phrases, then in sentences. Accuracy emphasizes vocabulary plus pronunciation and spelling, with success measured by communication with a highly sympathetic listener. Students can comprehend or produce texts such as simple notes, conduct a peer interview, and basic phone conversations. Prerequisite: None. Competency Goal: Statement on Competencies Stage 1.2-1.3 Reading, Writing, Listening, and Speaking. ACTFL: Novice Mid to Novice High.

CAN RUSS 4 Elementary Russian, 2nd semester

Course emphasis is on listening and speaking, ơ reading and writing. Course goals include development of broader vocabulary and functional competence that was begun in the first stage of language competency including content areas such as greetings, introductions, daily activities, days of the week, months of the year, numbers, seasons, weather, family members, school subjects, simple daily activities/hobbies, and sports. The language functions develop competencies to carry on a basic conversation using learned phrases and expressions, and to answer and ask questions. Initial stages of accuracy in Russian expands to sentences. Communication is increased and reflects the ability to complete a simple task in "real world" situations. Students can expect to comprehend or produce texts such as instructions, a basic phone conversation or peer interview, as well as postcards and notes, personal biographical information, and descriptions of daily routine or school experiences. Prerequisite: CAN RUSS 2 or Statement on Competencies Stage 1.2 Reading, Writing, Listening, and Speaking. Competency Goal: Statement on Competencies Stage 1.2 Reading and Writing; 1.3 Listening and Speaking. ACTFL: Novice Mid to Intermediate Low.

CAN RUSS SEQ A: Sum of the content of CAN RUSS 2+4 - 10 semester units/year required

California State University, and University of California, May 1993.

CAN RUSS 8 Intermediate Russian, 1st semester

Course emphasis is on listening, speaking, reading, and writing. Depending on the needs of the program, greater emphasis may be placed on some competencies over others. Course goals include the development of vocabulary and functional competence to express personal meaning. Students are able to function in a variety of every day survival situations. Additional content areas include introduction of cultural discussions such as on topics of current economic and political developments in Russia, as well as on the development of increasing creativity in expressing ideas in Russian. Language functions enable the student to participate in short conversations, understand a wider variety of written texts, and develop writing skills that relate to practical needs, short letters and simple notes. Students develop accuracy by responding with sentences and demonstrate sustained control of appropriate language. Students are able to survive in a Russian-speaking environment. Competency reflects an ability to complete a "real world" task. Students can comprehend or produce texts such as announcements, instructions, and a phone conversation, as well as postcards, notes, and descriptions of daily routine or school experiences. Prerequisite: CAN RUSS 4 or Statement on Competencies Stage 1.2-1.3 Reading and Writing; 1.3 Speaking and Listening. Competency Goals: Statement on Competencies Stage 2.1-2.2 Reading, Listening, and Speaking; 1.3-2.1 Writing. ACTFL: Intermediate Low to Intermediate Mid.

CAN RUSS 10 Intermediate Russian, 2nd semester

Course emphasis is on speaking, listening, writing, and reading. Depending on the needs of the program, greater emphasis may be placed on some competencies over others. Course goals include expanding competence to adapt successfully to new situations and to move from concrete toward more generalized and factual information, and then begin to handle abstract topics in familiar contexts. In speaking and writing content areas, the immediate environment is expanded to understand a wider range of topics including current events, travel, leisure, history, politics, and ecological issues, as well as some areas of business and economics. Language functions developed enable students to expand competence in providing descriptions and narration that relates not only to the present and future, but also to the past. Language accuracy developed enables students to state opinions that, in moving to the next stage, can be supported in discussions. Students can comprehend or produce texts such as ads, announcements, instructions, and a simple phone conversation or peer interview, as well as postcards, notes, personal biographical information, and descriptions of daily routine or school/work experiences. Prerequisite: CAN RUSS 8 or Statement on Competencies Stage 2.1 Reading, Listening, and Speaking; 1.3 Writing. Competency Goals: Statement on Competencies Stage 2.2-2.3 Speaking, Listening, and Reading; 2.1-2.2 Writing. ACTFL: Intermediate Mid.

CAN RUSS SEQ B: Sum of the content of CAN RUSS 8+10 - 10 semester units/year required.

California State University, and University of California, May 1993.

Course Descriptions
for Sociology Courses in the
California Articulation Number System

CAN: SOC 2 Introduction to Sociology

An introductory study of the basic concepts, theoretical approaches, and methods of sociology. Topics typically include the analysis and explanation of social structure, social change, group dynamics, socialization and self, social stratification, and cultural diversity. Course objectives include the ability to apply sociological ideas to everyday life.

CAN: SOC 4 Introduction to Social Problems

An identification and analysis of contemporary social problems including (1) the role of power and ideology in the definition of social problems, (2) their causes and consequences, (3) evaluations of proposed solutions, and (4) methods of intervention. Topics will vary.

CAN: SOC 6 Introduction to Statistics in Sociology

Prerequisite: competency in intermediate algebra or satisfaction of ELM. Students apply statistical methods to sociological data. Topics drawn from both descriptive and inferential statistics usually include levels and types of measurement; measures of central tendency and dispersion; normal and chi-square distributions and hypothesis testing. Computer applications may be included.

CAN: SOC 8 Introduction to Research Methods

Students examine fundamental elements of empirical research and the ways sociologists think critically. Includes attention to the nature of theory, hypothesis, and variables. Application of analytical tools including informal logic and research design, such as survey methods, participant observations and comparative historical research.

Course descriptions developed by Sociology faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993. Reviewed Spring 1998 and Spring 2002.

Course Descriptions for Spanish Courses in the California Articulation Number System

CAN SPAN 2 Elementary Spanish, 1st semester

The main focus is on listening and speaking, with reading and writing as supporting skills. Content areas include: formulaic expressions relating to daily life, environment, and routine activities, such as simple greetings, leave-takings, and courtesy expressions, family members, numbers, time, dates, weather, colors, and basic objects in the immediate environment. Language user functions primarily with learned words, phrases and formulaic expressions to list, enumerate, identify, and express minimal courtesies and agreement and disagreement. Accuracy emphasis is on vocabulary, pronunciation and spelling, with success measured by interaction with a very sympathetic listener/reader. The student can demonstrate the ability to comprehend and produce simple formulaic texts such as schedules, addresses, phone numbers, ads, weather reports, short information articles, notes written for native readers, signs, and postcards. Production shows occasional but not sustained creation with language to express personal meaning. The language user may also occasionally infer meaning from context and begin to understand the gist of unfamiliar material. Prerequisite: None. Competency Goal: Statement on Competencies Stage 1.2-1.3 Listening, Speaking, Reading, and Writing. ACTFL: Novice Mid to Novice High.

CAN SPAN 4 Elementary Spanish, 2nd semester

Course emphasis is on receptive competencies, listening and reading, and productive competencies, speaking and writing, at an approximately equal level. Course goals include the further development of language competency begun in the first stage including content areas: settings involving shopping, restaurants, lodging, asking directions and getting information about travel, transportation, etc., to express personal meaning and interact successfully in informal situations of daily life. Language functions include the ability to understand simple statements and questions and to participate in informal conversation by asking and answering questions. Students can supply personal information and simple descriptions both orally and in writing, and fulfill routine needs. Accuracy consists mainly of sentences and strings of sentences, with ideas juxtaposed. Writing may reflect oral language. Both speech and writing still require a sympathetic listener/reader. A student can get into, through, and out of a routine social or uncomplicated survival situation. Listeners will understand main ideas and some details in straightforward authentic auditory and written texts produced for native speakers. Students can expect to produce short messages, notes, letters, and descriptions of self, family, personal, and routine school and work experiences. Prerequisite: CAN SPAN 2 or CAN SPAN 1+3 or Statement on Competencies Stage 1.2 Reading, Writing, Listening, and Speaking. Competency Goal: Statement on Competencies Stage 2.1-2.2 Listening, Reading, Speaking, and Writing. ACTFL: Intermediate Low to Intermediate Mid.

Quarter courses may be identified as CAN SPAN 1, 3, 5

CAN SPAN SEQ A: Sum of the content of CAN SPAN 1+3+5 or CAN SPAN 2+4 - 10 semester units/year required.

Course descriptions developed by Spanish faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993.

CAN SPAN 8 Intermediate Spanish, 1st semester

Reading and writing are increasingly stressed, while listening and speaking continue to develop. Courses at this level generally include formal study about the language structure, although not as the central focus of course content. Course goals include further development of vocabulary and functional competence. Content is expanded beyond "survival" needs in the immediate environment and deals in greater detail with areas such as money matters, professions/occupations, health, social and recreational activities, general feelings. There is an increased awareness of cultural norms, values, and culturally relevant and appropriate customs and events. Developing functions include asking/giving directions, using culturally appropriate greetings, introductions, accepting and refusing invitations, with an expanded repertoire of courtesy formulas, as well as the ability to talk about self, personal preferences, and activities in some detail, provide descriptions, and participate more in simple conversations. Accuracy is quite high in basic structures and vocabulary use, while attempts to use multiple time references and more complex discourse are still halting and require a somewhat sympathetic listener or reader. Productive and receptive skills are assessed with texts such as letters, short messages, notes, and descriptions of school/work experiences. Prerequisite: CAN SPAN 4 or CAN SPAN 3+5 or Statement on Competencies Stage 2.1 Reading, Writing, Listening, and Speaking. Competency Goals: Statement on Competencies Stage 2.2-2.3 Reading, Writing, Listening, and Speaking. ACTFL: Intermediate Mid to Intermediate High.

CAN SPAN 10 Intermediate Spanish, 2nd semester

Course emphasis is on culturally authentic reading and writing, along with continued development of listening/speaking competencies. Courses generally continue formal study of language structure and may introduce basic literary concepts. Focus on development of cohesive written narratives and expository prose, as preparation for higher level specialized work. Content areas include: current events, media, politics, values, history and traditions, social issues, customs, etc., with increased awareness of target cultural concerns, norms and values, and culturally specific customs and events. Functions include asking/giving directions, using culturally appropriate greetings, introductions, and a larger repertoire of courtesy formulas, as well as the ability to talk about personal preferences and activities in growing detail, provide descriptions and participate actively in conversations. Competency reflects the emerging ability to deal with complicated situations, and to attempt to discuss topics beyond immediate and personal needs such as current events, politics, business, cultural and moral issues, history and customs, and the use of forms indicating both past and future time. Accuracy focuses on narration and description in past and future time, as well as increasing control of content and sustained control of appropriate language. Student can comprehend and produce spoken and written messages, short reports, narrative texts such as letters, diaries, and summaries. Prerequisite: CAN SPAN 8 or CAN SPAN 7+9 or Statement on Competencies Stage 2.2 Reading, Writing, Listening, and Speaking. Competency Goals: Statement on Competencies Stage 2.3 Reading, Writing, Listening, and Speaking. ACTFL: Intermediate High.

Quarter courses may be identified as CAN SPAN 7 9, 11

CAN SPAN SEQ B: Sum of the content of CAN SPAN 7+9+11 or CAN SPAN 8+10 - 6-10 semester units/year required.

Course descriptions developed by Spanish faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1993. Reviewed Spring 1998.

Course Descriptions
for Speech/Communications (formerly know as Speech)
Courses in the California Articulation Number System

CAN SPCH 2 Introduction to Communication Theory

This course focuses on theoretical principles, processes, variables, and results of communication. Emphasis on the assumptions, methods, and processes of communication research.

CAN SPCH 4 Introduction to Public Speaking

This course includes theory and techniques of public speaking. Emphasis is on the logical organization and composition of informative and persuasive speeches; practice in clearly stating and developing ideas.

CAN SPCH 6 Argumentation

This course focuses on analysis, reasoning, advocacy, and criticism of ideas. Emphasis on deriving conclusions based on valid evidence and sound inferences without using fallacies of thought and language. Students will demonstrate basic principles through a variety of oral presentations and written assignments.

CAN SPCH 8 Interpersonal Communication

Introduction to interaction processes in interpersonal communication settings. Emphasis on effective and appropriate uses of verbal and non-verbal messages in the initiation, development, maintenance, and termination of personal and professional relationships.

CAN SPCH 10 Small Group Communication

The study of communication in a variety of small group contexts. Key components include roles, functions, leadership, and norms. Problem solving, conflict management, and decision making skills are emphasized through simulations and small group discussions.

Speech course descriptions developed by faculty under a joint project of the California Community Colleges, California State University, and University of California, May 1991. Reviewed Spring 1994, Spring 1997 and Spring 2002.

APPENDIX K

CAN

California Articulation Number System

CAN Institutional Statement Commitment

In recognition of the significant role of articulation in support of the transfer function and the demonstration of good faith efforts to this end statewide, _____ wishes to participate in the CALIFORNIA ARTICULATION NUMBER SYSTEM.

It is our understanding that:

Any campus that meets the requirements established as criteria for each California Articulation Number course and that wishes to participate in the CAN System agrees to the following guidelines and principles:

a) Use of a California Articulation Number denotes faculty-approved course agreements.

b) Participating campuses agree to accept identically numbered CAN courses "in lieu of" their own courses from all other participating campuses for all purposes, recognizing that CAN courses are not necessarily identical in content, but are acceptable "in lieu of" each other.

c) Participating campuses will publish lists of their courses and appropriate California Articulation Numbers.

d) Participating campuses may withdraw CAN designations from catalogs at the time of reprinting while honoring catalog rights for transfer students.

SIGNED:

_____

Articulation Officer **Date**

_____

Chair, Academic Senate **Date**

_____

Chief Executive Officer (or designee) **Date**

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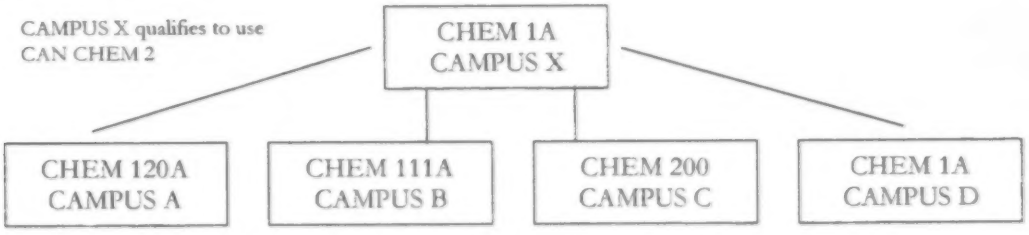
APPENDIX L

Participating Campuses

Campus X has direct articulation with Campuses A, B, C, and D; has qualified a Chemistry course to use CAN CHEM 2; campus officials have signed a Statement of Commitment to articulation and the CAN System, and returned the Statement to the CAN Coordinating Office. Campus X is now a participating campus.



Students at Campus X have the benefit and assurance that the qualified course, CAN CHEM 2, will be accepted at all participating campuses that have also qualified a course for CAN CHEM 2. It will be used to meet the same requirements as the receiving campus course meets.

Participating Campuses (August 2002)

Allan Hancock College
American River College
Antelope Valley College
Bakersfield College
Barstow College
Butte College
Cabrillo College
Canada College
Cerritos College
Cerro Coso College
Chabot College
Chaffey College
Citrus College
City College of San Francisco
Coastline College
College of Alameda
College of Marin
College of San Mateo
College of the Canyons
College of the Desert
College of the Redwoods
College of the Sequoias
College of the Siskiyous
Columbia College
Compton College
Contra Costa College
Copper Mountain College
Cosumnes River College
CPSU, San Luis Obispo
Crafton Hills College
CSPU, Pomona
CSU, Bakersfield
CSU, Chico
CSU, Channel Islands
CSU, Dominguez Hills
CSU, Fresno
CSU, Fullerton
CSU, Hayward
CSU, Long Beach
CSU, Los Angeles
CSU, Northridge
CSU, Sacramento
CSU, San Bernardino
CSU, San Marcos
CSU, Stanislaus
Cuesta College
Cuyamaca College
Cypress College
De Anza College
Diablo Valley College
East Los Angeles College
El Camino College
Evergreen Valley College
Feather River College
Foothill College
Fresno City College
Fullerton College
Gavilan College
Glendale College
Golden Gate University
Golden West College
Grossmont College
Hartnell College
Humboldt State University
Imperial Valley College
Irvine Valley College
Lake Tahoe Comm. College
Laney College
Las Positas Comm. College
Lassen College
Long Beach City College
Los Angeles City College
Los Angeles Harbor College
Los Angeles Mission College
Los Angeles Pierce College
Los Angeles Southwest College
Los Angeles Trade-Tech College
Los Angeles Valley College
Los Medanos College
Marymount College
Mendocino College
Merced College
Merritt College
MiraCosta College
Mission College
Modesto Junior College
Monterey Peninsula College
Moorpark College
Mt. San Antonio College
Mt. San Jacinto College
Napa Valley College
Ohlone College
Orange Coast College
Oxnard College
Palomar College
Palo Verde College
Pasadena City College
Patten College
Point Loma Nazarene College
Porterville College
Reedly College
Rio Hondo College
Riverside Community College
Sacramento City College
Saddleback College
San Bernardino Valley College
San Diego City College
San Diego Mesa College
San Diego Miramar College
San Diego State University
San Francisco State University
San Joaquin Delta College
San Jose City College
San Jose State University
Santa Ana College
Santa Barbara City College
Santa Monica College
Santa Rosa Junior College
Santiago Canyon College
Shasta College
Sierra College
Skyline College
Solano College
Sonoma State University
Southwestern College
Taft College
Ventura College
Victor Valley College
Vista College
West Hills College
West Los Angeles College
West Valley College
Yuba College

APPENDIX M

Abbreviations for the CSU and UC Campuses Used by the California Articulation Number System

Abbreviation	*Campus Name*
CMA	California Maritime Academy
CPP	California State Polytechnic University, Pomona
CPSLO	California Polytechnic State University, San Luis Obispo
CSUB	California State University, Bakersfield
CSUC	California State University, Chico
CSUCI	California State University, Channel Islands
CSUDH	California State University, Dominguez Hills
CSUFR	California State University, Fresno
CSUFULL	California State University, Fullerton
CSUHAY	California State University, Hayward
CSULB	California State University, Long Beach
CSULA	California State University, Los Angeles
CSUMB	California State University, Monterey Bay
CSUN	California State University, Northridge
CSUS	California State University, Sacramento
CSUSB	California State University, San Bernardino
CSUSM	California State University, San Marcos
CSUSTAN	California State University, Stanislaus
HSU	Humboldt State University
SDSU	San Diego State University
SFSU	San Francisco State University
SJSU	San Jose State University
SSU	Sonoma State University
UCB	University of California, Berkeley
UCD	University of California, Davis
UCI	University of California, Irvine
UCLA	University of California, Los Angeles
UCR	University of California, Riverside
UCSD	University of California, San Diego
UCSB	University of California, Santa Barbara
UCSC	University of California, Santa Cruz

APPENDIX N

Catalog of CAN Courses

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

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